



The safety of your family
is in your hands

Participant Guide 2013



CALIFORNIA POISON CONTROL SYSTEM

Pesticide Manual

for Promotores Working
with California Farmworkers

CALIFORNIA POISON CONTROL SYSTEM

Pesticide Training



The Pesticide Safety Guide for Community Health Workers / Promotores (CHW/P) was developed by the California Poison Control System with input from Western Center for Agricultural Health and Safety at the University of California, Davis, and the California Department of Pesticide Regulation. This project was funded by the California Department of Pesticide Regulation.

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Introduction

Farming is one of the most important industries in the U.S., and much of the country's fruits and vegetables are grown in California. In order to grow fruits and vegetables pesticides are often used in farming. Pesticides are special chemicals that control unwanted pests (e.g. insects, fungus, weeds, rodents) that may attack plants and keep them from growing well. However, pesticides can also be harmful to farm workers if they are used in or around their workplaces.

Pests that are unwanted in the home setting are also a common concern that is often remedied by a variety of control methods and choices. Sometimes people choose to use pesticides in and around their home to control certain pest problems. Again, pesticides can be harmful to people, pets and the environment if they are used in and around the homes we live in.

Educating people and creating awareness about the safe use of pesticides in and around farms and homes can greatly reduce the risks associated with the use of these chemicals.

Our goal is to provide information that you can use to help farm workers protect themselves and keep their families safe.

In order to better understand farm workers' needs, CPCS held a total of 10 focus groups across 5 California cities: Los Angeles, Fresno, Bakersfield, Salinas and San Diego. The purpose of these focus groups was to gain an understanding about the level of knowledge that rural and urban consumers and local promoters had about the hazards and proper use and safety of pesticides as well as to determine whether or not they have been potentially exposed to pesticides in the past at work or at home. Another purpose of these focus groups was to distinguish communication habits and preferences, and identify resources, opportunities and outreach methods.

We found that many urban and rural residents live in poorly maintained rental housing with pests and use insecticides and home remedies to eliminate pest problems. Although residents use pesticides, they are still worried about the chemicals and toxins in these products. Many times residents will use more than one product

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CHW/P know the realities faced by field workers.

at a time to remove pests from their homes or work. Additionally, many farm workers are exposed to pesticides and reported limited access to medical care after an incident. Farm workers expressed that they urgently need accurate and easily understandable information on pesticides as well as a safe way to report dangerous practices at the workplace. Finally, promotores said that they do not feel well served by available pesticide education materials and would like more resources, including mobile tools.

Farmworkers share a set of unique attributes that require creative and mixed methodology training and education methods. Many farm workers cannot read or write or have very low literacy rates. The average level of education is 7th grade and 20% are considered to be illiterate in their own language (non-English). Among this population, 84% are Spanish speakers with limited English ability and 65% are Mexican born according to the 2009 National Agricultural Worker Survey (NAWS). Additionally, our research findings from California's field workers and promotores/CHWs, showed that we need to not only translate pesticide educational materials into Spanish, but also to customize the training to better serve the farm worker community. Because of the unique cultural and language characteristics of this group, there is a need for innovative, interactive, linguistically and culturally sensitive models to

bring safety and health information to Hispanic field workers. The **use of community health workers, or CHW/P, has proven successful to increase awareness about the many health issues that affect the farm worker community.** CHW/P are effective because they not only speak the same language, but also share the culture and beliefs with the community they serve. CHW/P know the realities faced by field workers. Within their communities, CHW/P are respected and recognized as sources of information.

The objective of this training is to assist CHW/P in their efforts **to recognize and understand pesticides and symptoms of pesticide exposure, to understand farm workers' rights and the importance of reporting suspected exposure, to know where to refer exposed persons to obtain advice, and learn how to keep themselves and their families safe from pesticide exposure.** Trained CHW/P will disseminate the information with their peers, using educational materials designed for that purpose, including: videos, a multimedia website, and handouts.

MODULE 1

Talking About Pesticides in the Community

LEARNING OBJECTIVES

- To introduce the program
- Teach CHW/P how to build trust within their community
- Teach CHW/P how to start talking about pesticides with people in their community

ACTIVITIES

- Discussion: How do you build trust in your communities?
- Discussion: How do you discuss pesticides with community members in both households and fields?
Share a story of your experience working in the fields or with pesticides (if applicable).

CHW/P MATERIALS

- Participants Guide
- Evaluation



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1.1 Introduction

- a. Introductions and name tags
- b. Discussion questions.
 - a. What would you like to learn today?
 - b. Has anyone attended a training/workshop/conference on pesticides? If so, in what capacity?
 - c. Does anyone already provide education on pesticides? Please explain.
 - d. Challenges/barriers/strengths of pesticide education in the community?

1.2 How do I build trust with people I work with?



DISCUSSION: How do you build trust in your communities?

STEPS

STEP 1: Review the building trust key points of the presentation. Discuss each bullet point and explain why these are important, if you used these techniques, and about other skills not listed. Also explore myths related to pesticide poisonings.

Building Trust Key Points

It is important that the family or the person with whom you are speaking trusts you. Building trust is not simple. Sometimes it

takes more time and effort than you think. Here are some tips to help you build trust:

- Be on time! By being on time you demonstrate that you do what you promise.
- Dress appropriately! You will receive more respect by taking time to dress-up.
- Introduce yourself as a person who wants to learn and share with the community, not as a person who knows everything and has come to teach or inform.
- Listen carefully and choose the best way to share information and knowledge with the family—don't judge them.
- Be open and honest about the reason for your visit and how the family and the entire community will benefit. Share with them why this topic is important to you and any stories you have about being affected by pesticide poisonings.
- Avoid singling out the family or household you are speaking with. It is more helpful to talk about the community in general.
- Acknowledge the concerns about other families or the community, but do not join in any criticisms.
- Clear up any misunderstandings or myths in a respectful way. Two common myths related to pesticides are:
 - Machismo is the notion that men must have a “macho” attitude. This can have harmful effects on one's health if a man thinks he is invincible from pesticides and/or does not seek help when he feels sick as he wants to be “tough” or “macho.”



Listen carefully and choose the best way to share information and knowledge with the family—don't judge them.

- Humoral medicine is the belief that hot and cold must never be mixed or illness will occur. This leads to the notion that if you have been working in the hot sun, you should not wash your hands with cold water or take a shower right away because you should not expose yourself to “cold” water if you are hot. This is a problem for field workers who have been exposed to pesticides and need to wash immediately.
- Keep your promises—if you can't, let them know the reasons.
- Demonstrate ability to take action (initiative).
- Demonstrate creativity—develop a work plan targeting the issue.
- Act on facts, not on assumptions.
- Before giving a solution, understand the whole picture.
- Seek positive solutions for adverse circumstances
- Be self-reflective, learn from experiences
- Acknowledge when you are wrong
- Be flexible

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1.3 How do I start talking about pesticides in the community?

Talking about pesticides, particularly those used in the home, often involves discussing various bugs, mice and other pests. Talking about these pests may involve a discussion about household cleanliness. This might be difficult for a family to discuss as they may feel badly when they realize some of their practices may be harmful or that they have done things the “wrong” way.

Talking about pesticides with farm workers while they are at work may also be challenging because of the shortage of space (for education/trainings), lack of time, uninterested participants, unwilling employers, and language barriers. Farm workers generally migrate in accordance with the harvest season, which can make follow-up difficult. Workers often fear outsiders, preferring to stick with family members or close friends. Because of these factors, it is necessary to use a participatory education model that includes role-

Talking about pesticides with farm workers while they are at work may also be challenging



playing activities, demonstrations, skill practice, the teach-back method, discussion groups, and games. It is also recommended that you incorporate the experimental teaching model into trainings and education. By having flipcharts with pictorial presentations that are culturally relevant, even the lowest literacy farm workers can understand the dangers of pesticides.

As CHW/P, it is important to use common terms. Not everyone will use the term pesticide. Instead, they might call it bug spray, roach killer, weed killer, poison, etc. Be sure to say what you mean by the word “pesticide”.



DISCUSSION: How do you discuss pesticides with community members in both households and fields? Share a story of your experience working in the fields or with pesticides (if applicable).

STEPS

STEP 1: Review suggestions for ways to start talking about “pesticides” in your community.

- Read the label before buying or using a product
- Mention that pests, as well as some of the pesticides used, may be harmful and that you would like to share ideas with them to help prevent having to use pesticides. Or if they have to use pesticides, there may be safer ways to use them.

- Talk about pesticides used on the lawn or in the garden.
- Ask the family to share the concerns about pests and pesticides or to see if they have any issues they want to discuss.
- Talk about pests in general and how they get into our homes and the community
- Talk about pesticides used at work
- Talk about clothing worn while at work
- Talk about rules and regulations at their work. What kind, if any, of training or informational session have they received on pesticides?

STEP 2: Break into groups of 4-5. Have one participant play the role of the CHW/P, and have the other participants be the field worker and household families. Using the tips outlined above, use your own skills as CHW/P, role-play how to begin a conversation about “pesticides” with the group.

STEP 3: Return to the large group and share what you liked best and share best practices. Answer the following questions:

- What suggestions or conversation starters did you like best? Why?
- Do you have other suggestions on how to talk about pesticides in the field and household that worked well for you?

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By the end of this lesson, participants will be able to:

- **Build trust with the people they are working with and provide two examples.**
- **Know how to start talking about pesticides with people in their community and list two examples.**



Notes

Lined area for taking notes, featuring a spiral binding on the left side.

MODULE 2

Pesticide Basics

LEARNING OBJECTIVES

To train and educate CHW/P on pesticide basics including;

- Pesticide exposure pathways
- Ingredients
- Utilization practices
- Transmission

ACTIVITIES

- Discussion: How to identify different pesticides and their active ingredients.
- Discussion: How do pesticides enter our bodies?

CHW/P MATERIALS

- Participants Guide
- Evaluation



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2.1 What are Pesticides?

Pesticides are chemicals used to control, prevent, destroy, repel, attract or mitigate any unwanted “pests.” Unwanted insects, rodents, weeds and even germs can be considered “pests.” While pesticides may help control unwanted pests, they can also be harmful to people, animals and the environment. Sometimes it is very hard to see or smell the pesticides. However, just because you cannot see or smell them, does not mean the chemicals are not still there.

2.2. Type of Pesticide

How a pesticide will affect our health depends on the type of pesticide and its toxicity or how toxic it is. Toxic means that a substance has the ability to produce injury. Not all pesticides are the same and some are less toxic than others.

What is Toxic or Toxicity?

A substance is toxic or poisonous if it can cause ANY negative symptom, even if only a mild rash.

There are degrees of toxicity depending on the substance, the amount, the length of time of the exposure and type of exposure (on the skin versus ingestion).

All of these factors determine the toxicity and the treatment needed. For example, the heart medicine taken by a grandmother is essential for her good health. But, the same dose of medicine taken by her 13-month grandchild is dangerously high and considered toxic.

Insecticides

Cholinesterase inhibitors affect both the human and insect nervous system. The two types of cholinesterase inhibitors used in agriculture include: Organophosphates and Carbamates

Both groups produce similar symptoms, by targeting the portion of the nervous system that uses the signaling compound acetylcholine to stimulate the nerves. If serious exposure occurs, carbamates cause effects that usually resolve or improve within 24-48 hours. Recovering from organophosphate poisoning can take several weeks.

Pyrethrin and pyrethroid insecticides: Pyrethrins and pyrethroids also affect the sodium channel in some parts of the nervous system, including nerves on the skin and in the airways. When they are swallowed or inhaled they can also affect the nerves in the brain. Most often the effects are short-term, less than 48 hours, like the effects of the carbamate cholinesterase inhibitors.

Herbicides

Most herbicides have low toxicity to humans because they affect things that plants do, like making sugar from sunlight, that people cannot.

Two herbicides, diquat and paraquat, work by directly destroying plant tissue, like acid or lye. Both can cause serious reactions in people.

The popular herbicide glyphosate (e.g. the active ingredient in “Round-Up”) does not usually cause poisoning in people. Some

glyphosate formulations contain a detergent or soap compound that can cause local reactions to the eyes and skin.

Fungicides

Many fungicides have low toxicity to humans because they affect things like mold or fungus much more than they affect people. Sulfur has many uses in agriculture and does not often cause cases of poisoning or systemic effects. However, it can cause local reactions to the skin, to the eyes, and to the airways.

Other fungicides, called thiocarbamates, cause poisoning by blocking the normal breakdown of a common ingredient of drinks, called ethyl alcohol. They can also cause local effects.

2.3 How are Pesticides used?

Most pesticides are used in agriculture, but pesticides are also used at home and in the community to control or get rid of:

- Bugs, mice and rats
- Weeds on the lawn and in the garden
- Mosquitoes in the community
- Fleas and ticks on pets and around the house and yard
- Lice
- Germs, fungi and bacteria

Different types of pesticides are used to control various pests:

- Insecticides to kill or control insects
- Herbicides to control weeds

- Rodenticides to control rats, mice and other rodents
- Fungicides to control plant disease

2.4 Pesticide labels

ALWAYS READ and UNDERSTAND THE PESTICIDE LABEL BEFORE USING!

There are two components in pesticides:

1. the active ingredient
2. the inactive or inert ingredient

The active ingredient is the part of a pesticide that kills or controls the target pest. You can find out what the active ingredient is by reading the label.

Inert or inactive ingredients are added to the pesticide to act as a carrier of the pesticide or to improve the way the active ingredient works. Inert ingredients make applying the pesticide easier and more efficient. Water, kerosene, detergents, and chlorinated solvents are commonly used inert ingredients.

How to read a pesticide label

Labels use three signal words, **Danger**, **Warning**, or **Caution** to show how dangerous a pesticide can be to people who are overexposed on an acute (that is, short-term) basis.

Signal words do not provide any information about potential problems with long-term exposure.

Always read and understand the pesticide label before using!

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The signal words tell you the potential hazard of active and inert (other substances, such as solvents) ingredient contained in pesticides. The signal word is based on laboratory tests on animals that indicate the potential effects if the pesticide is eaten, swallowed, inhaled, or gets on skin or in eyes.

Pesticides with the signal word **Danger** are the most toxic or dangerous. Often, they will also have the word Poison and the skull-and-crossbones on the label.

The signal word **Warning** is applied to moderately toxic pesticides that may pose a specific hazard to people, such as severe skin or eye injury, or a particular danger to the environment.

Pesticides with the signal word **Caution** are the least toxic to people and are generally less dangerous. But still handle them carefully, and always follow the label instructions.

Any substance—whether a pesticide, household cleaner or over-the-counter medication can be dangerous if not used correctly.

The United States Environmental Protection Agency (USEPA) administers pesticide registration and labeling. Legal pesticides for use in California must be federally registered by both the USEPA and by the California Dept. of Pesticide Regulation.

USEPA recommends reading the label:

1. Before you buy the pesticide—to ensure it is the pesticide you need, and to learn if you need to use special protection/techniques to handle it.

2. Before you transport, mix or load the pesticide—to learn if there are any special precautions and/or risks. Also, to learn about first aid procedures that may be required in case of accidental exposure.
3. Before you apply the pesticide—to learn how to apply it, how much to apply, and potential re-entry restrictions.
4. Before you store the pesticide—to learn how to store it properly.
5. Before you dispose unused pesticide and/or empty container—to learn if there are special precautions to dispose of any unused pesticide and any special requirements to discard the empty container.

Pesticides come in many different forms and are applied in different ways:

- Sprayed from a truck or a tractor
- Sprayed from an airplane
- Injected into soil (fumigants that form a gas)
- Applied with a back pack or spray bottle
- Mixed with irrigation water
- Sticky paper and glue traps
- Gel and pellet forms
- Powder and granules in bags or tubes
- Baits
- Seeds
- Insect Repellent
- Shampoos and soaps



DISCUSSION: How to identify different pesticides and their active ingredients.

STEPS

STEP 1: Receive a pesticide label from the trainer

STEP 2: Identify the pesticide and tell the group what it is and what it is used for, what the active ingredient is in the pesticide, and EPA Number (if applicable).

2.5 How can people be exposed to Pesticides?

There are many ways that people can be exposed to or come in contact with pesticides:

- Drift from a nearby field that has just been or is being sprayed.
- Drift from pesticides being sprayed in the community.
- Playing, working or just being in areas that have just been sprayed such as homes, schools, offices, stores, factories, fields, lawns and gardens.
- Drinking water contaminated with pesticides.
- Using household pesticides, or bug repellants
- An accident where a person mistakenly eats or drinks a pesticide
- A person is splashed or sprayed in the eyes or on the body with pesticides
- Eating fruits and vegetables with pesticides on them
- Touching things that have pesticides on them (the floor, ground,

toys, clothing, plants) and then putting hands in the mouth.

- While mixing pesticides when getting them ready to use
- Handling clothes that have pesticides on them.
- Processing plants (i.e. fruit)

Examples of using pesticides in an **incorrect** manner and how people may become sick or poisoned:

- Not reading or understanding the pesticide label
- A pesticide was taken out of its original container/improperly stored and a person accidentally ate or drank the pesticide
- Applying pesticides directly onto the head or skin of a person to kill lice or parasites
- Applying certain pesticides without protective gear (gloves, glasses, or masks)
- Smoking or eating after working with pesticides.



DISCUSSION: How do pesticides enter our bodies?

STEPS

STEP 1: Learn about the topic

Listen to the trainer as she/he introduce the topic of pesticide exposure. Review the definition of pesticides as explained in the first section of this manual. This exercise is intended to create awareness about how pesticides can make someone sick and where exposures can occur in common situations farm workers face in their work.

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STEP 2: Make a large body drawing

Make a large drawing of a person's body. Have one person lie down on the paper while another person traces their outline. Next, tape or tack the drawing to a wall so everyone can see it. If you want, make two drawings—one for the front of the body and one for the back of the body.

STEP 3: Mark the location of possible exposure points

Use the drawings to show where the possible pesticide exposure points/routes of entry can occur on our bodies. Each person in the group marks an "X" on a part of the body where he or she thinks is an area of potential exposure (i.e., mouth or skin).

If you have not worked with pesticides, share stories from other farm workers they know or if they can imagine possibilities.

STEP 4: Discuss common pesticide exposures

The trainer will ask questions the following questions to help people talk about pesticides.

What effects can people feel from pesticides?

What activities or kinds of exposure can possibly cause effects?



By the end of this lesson, participants will be able to:

- **Identify how pesticides are used**
- **Identify information from the pesticide label**
- **Explain what pesticides are and what they are used for**
- **Describe 3 ways pesticides enter the body**

Notes

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MODULE 3

Pesticides and Your Health

LEARNING OBJECTIVES

To train and educate CHW/P about the dangers of

- pesticide exposures
- understand who is at most risk
- how much is too much
- what to do in the event of a pesticide exposure or poisoning?

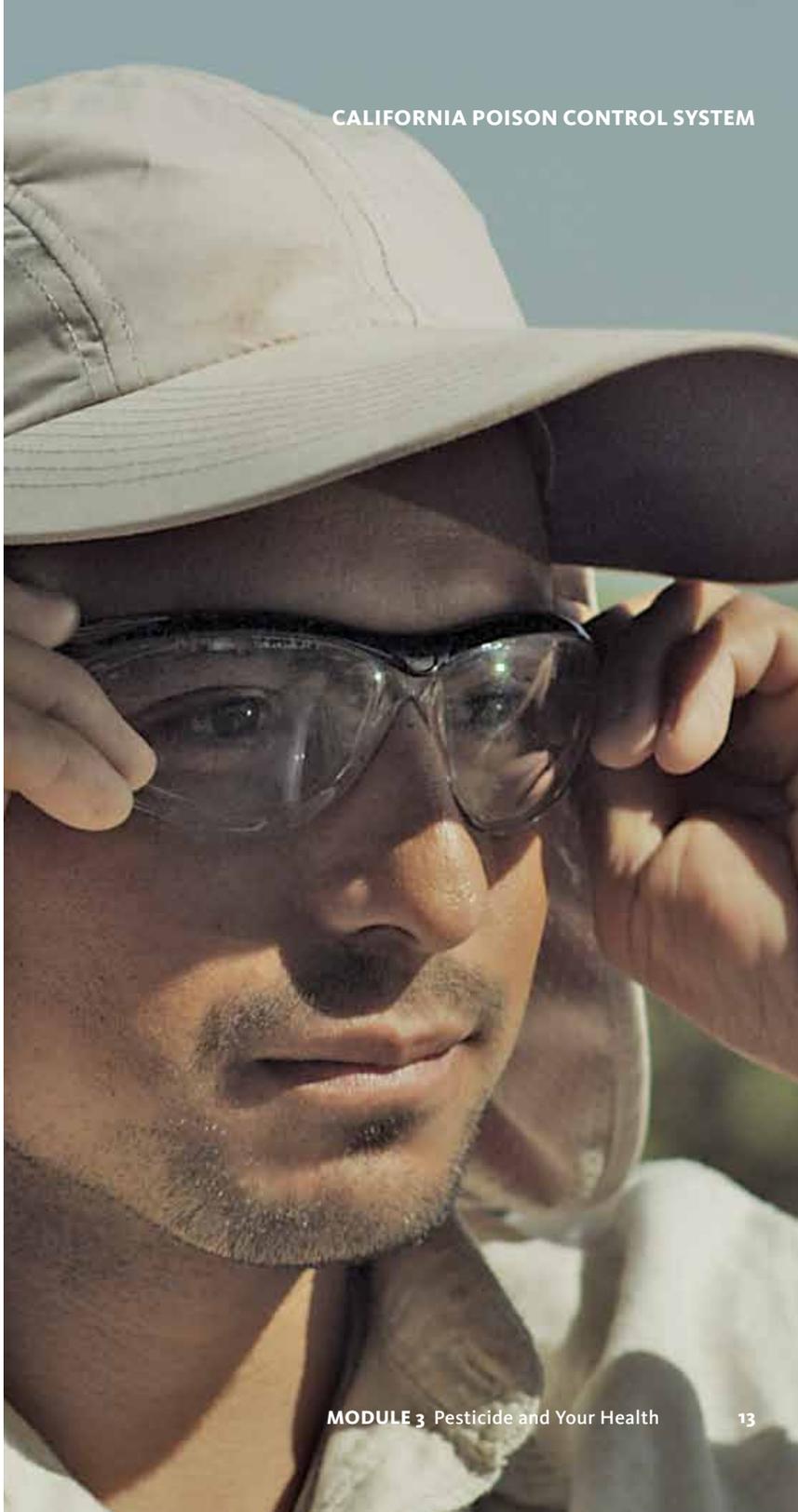
ACTIVITIES

- Discussion: Do you understand the Dose-Time relationship and examples (i.e. coffee, medicines)
- Discussion: Do you know if exposure to a pesticide or chemical would have the same effect on a child as it would on the child's mother. Learn why children are more vulnerable
- Watch video *Signs and Symptoms*
- Discussion: Do you know where to go in case of a poisoning or an emergency

CHW/P MATERIALS

- Participants Guide
- Evaluation
- Community Clinic Resource List (based on location of training)

PARTICIPANT GUIDE



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Pesticide health effects also depend on the route of exposure or how chemicals get into the body.

3.1 Can pesticides be dangerous to our health?

Yes. But it depends on several factors:

- amount of pesticide exposure
- length of exposure
- type of exposure
- type of pesticide
- age
- sex
- weight
- preexisting conditions (i.e., pregnancy)
- nutrition
- interaction of other chemicals
- tolerance
- other health conditions

The “dose-time” relationship.

The damage depends on the dose or the amount of pesticide a person has been exposed to and the time or duration of this exposure.

- Dose is the amount of the pesticide
- Time is the length of time exposed to the pesticide

For example, think how a person would feel if s/he drinks one beer in an hour. Now, think how a person would feel if s/he drinks three beers in an hour.

Drinking three beers in an hour will likely make a person feel dizzy and less coordinated. Drinking three beers over the course of a day would not have the same effect as drinking three beers in an hour. This is what we mean by the dose- time relationship.

In this example, three beers is the dose. But time makes a big difference. If a person drinks three beers in an hour the effect will be very different from three beers over the course of a day.

Do you understand the dose-time relationship and if so, do you have other examples (i.e. coffee, medicines)

3.2 Routes of exposure

(Building upon what was taught in Module 2)

Pesticide health effects also depend on the route of exposure or how chemicals get into the body. Some chemicals can be more harmful if they are swallowed or inhaled than if absorbed through the skin. Other chemicals are more harmful if they are absorbed through the skin than if they are inhaled.

3.3 Who is most vulnerable?

Children, elderly people, pregnant women and people with pre-existing conditions may be more vulnerable to the effects of pesticide exposure. There is particular concern about children because:

- Children are smaller and weigh less than adults.
- Children are not small adults. Just as you would not give the same amount of medicine to a child as an adult, a child can't

handle the same amount or the same exposure of a pesticide as a full grown adult.

- Children explore the world with their mouth and hands. Little ones learn about the world by touching and putting things in their mouths. They are more easily exposed to pesticides this way.
- Children are closer to the ground. Pesticides settle on the ground and floors and the dust that is on the floor. When children crawl or play on the floor or ground they are closer to pesticide residue. Their crawling also stirs up the contaminated dust which they can breathe in.
- Children are still developing. Before birth and throughout childhood, the body systems, like the nervous system (brains and nerves) and the circulatory system (heart, arteries, veins), are still growing in children. Exposure to pesticides when still developing may be more harmful and cause permanent damage.
- Children's bodies function differently than adults. Pound for pound, children breathe more air, and eat and drink more than adults.
- Children breathe more air and breathe faster than adults—so more toxins can get into their bodies.
- Children do not process toxins as quickly as adults—so more toxins stay in their systems longer. The parts of the human body such as the kidneys and liver that help get rid of waste or poison do not function like adults. In cases where an adult might be able to excrete or get rid of waste or poison, a child is unable to do this.

Would an exposure to a pesticide or chemical have the same effect on a child as it would on the child's mother?

3.4 How much can pesticides hurt us?

A person can be exposed to pesticides and have more than one symptom or sign. Many people may be exposed to pesticides and not even know it! In fact, in some cases, pesticides may not be the reason someone gets ill. Other things besides pesticides may cause some signs or symptoms that a person can have. Examples of pesticide poisoning symptoms caused by sources other than pesticides are stomachaches caused by the flu or by spoiled food, headaches and itchy eyes caused by allergies, headaches and stomachaches cause by drinking too much alcohol or even the effects of heat stress related symptoms. Consult your doctor if you have any questions about symptoms or illness.

There are two types of health effects—one is acute or immediate and the other is chronic or takes place over longer periods of time.



DISCUSSION: Watch video *Signs and Symptoms*

STEPS

STEP 1: Watch video *Signs and Symptoms*

STEP 2: After video, identify signs and symptoms that may be because of pesticide exposure and share with the group

Many people may be exposed to pesticides and not even know it!

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STEP 3: When you have finished providing signs and symptoms, look at the list below to learn about more signs and symptoms of possible pesticide exposure.

3.5 Signs and symptoms of potential acute pesticide poisoning

- Nose and Mouth: runny nose, drooling
- Chest and Lungs: pain, breathing problems.
- Stomach: pain, diarrhea, nausea and vomiting.
- Legs and Arms: muscle cramps or pains, twitching, trouble walking.
- Skin: itching, rashes, bumps, redness, blisters, burning, sweating too much.

- Head and Eyes: headaches, vision problems, small pupils.
- Hands: damage to fingernails, rashes, numbness and tingling in fingers.
- Other general signs: confusion, weakness, trouble concentrating, muscle twitching, restlessness and anxiety, bad dreams and trouble sleeping.

Remember, many of these signs and symptoms may also be caused by disease, other chemicals, or environmental agents (e.g., heat stress).

If you have any of these problems while working with pesticides, follow these steps:

- Leave the worksite immediately. Do not wait until you feel worse.
- Get away from the pesticides.

- Notify your supervisor (if you have one) immediately go to a hospital or clinic immediately.

If you have any of these problems while you are **not** at work, follow these steps:

- Get away from the pesticides (if applicable)
- Call **Poison Control** at **1-800-222-1222** (if possible, have the label with you when you call)
- Go to a hospital or clinic immediately.

A severe poisoning can seriously injure or even cause death. Other severe symptoms include:

- Unconsciousness
- Loss of control over bladder and bowels (going to the bathroom without control)
- Blue lips and fingernails
- Shaking

Remember that children are often more vulnerable than adults. The signs of acute pesticide poisoning in children are similar to adults, but may also include tiredness, fits and shaking (seizures) and unconsciousness.

3.6 What to do if someone has been exposed to pesticides?

If you or anyone else is seriously ill, call 911 for help. In less serious cases, contact your doctor or take the person immediately to a clinic or hospital.

Notify your supervisor if you have one. They must help you get the medical attention you may need.

In some cases of pesticide exposure, there should be steps taken before the person is taken to the clinic or hospital, such as removing contaminated clothing, washing exposed skin or eyes with clean water. Most pesticide labels have first aid information such as this on them to help reduce the effects of a pesticide exposure.

If you need to go to a hospital or clinic, it is important to tell the doctor, paramedic, or nurse that you think pesticides have caused the person to get sick. If possible, you should also tell them the following:

- Age, weight and symptoms of the person poisoned.
- Name of the product. If you can, bring the container or label so that the health provider may read it.
- USEPA Registration number from the pesticide label.
- Time of exposure and when the symptoms began. How the exposure happened?
- Amount swallowed (if the person drank it), inhaled or exposed to the skin.
- If other people were exposed and if they are experiencing similar problems and symptoms.

Who to call for free poisoning advice:

- Program and call the **California Poison Help Line** number, **1-800-222-1222**, in your phone for help 24/7 in English, Spanish and over 100 languages

Remember that children are often more vulnerable than adults.

The safety of your family is in your hands. **Protect it from pesticides.**

Who to report possible pesticide misuse to:

- Call your local **County Agricultural Commissioner's** office. You can get the number and be connected by calling toll-free, **1-87PestLine (1-877-378-5463)**. Your call is confidential and you can report pesticide problems without giving your name. Make sure to have the name of the county where the pesticide exposure or incident occurred.

Do you know where to go in case of a poisoning or an emergency? The trainer will provide information on local places and their addresses and phone numbers.



By the end of this lesson, participants will be able to:

- **Identify who is most vulnerable to pesticides**
- **Identify at least 3 common symptoms that may be from pesticide exposure**
- **Explain toxicity and dose-time relationships**

Notes

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MODULE 4

Pesticides at Work

LEARNING OBJECTIVES

To train and educate CHW/P on:

- Staying safe at work from pesticides
- Reading and understand an REI sign
- Understand workers right

ACTIVITIES

- Watch video *Start of the Day*
- Watch video *End of the Day*
- Discussion: If you were going to explain workers' rights to a friend, what would you say?

CHW/P MATERIALS

- Participants Guide
- Evaluation



The safety of your family is in your hands. **Protect it from pesticides.**



DISCUSSION: Watch video *Start of the Day*

STEPS

STEP 1: Watch video *Start of the Day*

STEP 2: After video, identify protective measures before and at work for the trainer to write on the board.

STEP 3: When you are finished, look at the list below to learn more about using protective measures at work.

4.1 If we work around pesticides ... How do we protect ourselves at work?

- **If you are applying pesticides, read, understand and follow the pesticide label**
- Wear appropriate work clothing (e.g., long pants, long sleeved shirt, shoes with socks, etc.)
- Wash hands before eating, drinking and smoking. Wash hands before and after going to the bathroom.
- Keep out of recently treated fields until the allowed time of reentry.
- Never take pesticides home from work
- Never take empty pesticide containers home from work.

Appropriate Work Clothing

- **Appropriate Work Clothing** is long or short sleeved shirts, long pants or shorts, shoes, socks, hats and glasses.
- **A Pesticide Handler** could be required to wear **Protective Work Clothing** and this will be covered in a Pesticide Handler Training. This clothing is only recommended if it is required by the pesticide label. One reason is the concern of heat related illness being possible when wearing such protective clothing. Pesticide labels rarely require fieldworkers (not early entry workers) to wear protective clothing or equipment since the objective is to keep fieldworkers out of a field being treated until they are told they can safely reenter the treated field (after the REI).
- If you are an applicator/handler you must be provided with the **Personal Protective Equipment (PPE)** that is in good condition.



4.2 If we work with pesticides...How do we protect ourselves and our families after work?

 **DISCUSSION:** Watch video *End of the Day*

STEPS

STEP 1: Watch video *End of the Day*

STEP 2: After video, identify protective measures after work. The trainer will write these on the board.

STEP 3: When you have finished describing protective measures at work, look at the list below to learn more about protective measures to reduce pesticide exposure after work.

- Take shoes off before coming into the house.
- Keep from hugging family until after getting cleaned up
- Change clothes after working with pesticides or in fields that have been sprayed with pesticides.
- Shower (if possible) or rinse off immediately after working with pesticides or in areas where they have been applied.
- Wash work clothes separately from the rest of your family’s clothes.
- Never re-use pesticide containers for anything else.
- Keep pesticides and other chemicals out of the reach of children.

The safety of your family is in your hands. **Protect it from pesticides.**



4.3 Workers Rights: What are my rights?

If you think that pesticides have made you sick at work, your employer must make sure that you are taken to the doctor immediately.

Many agricultural operations choose to use pesticides on their property, but there are ways to protect yourself and your family against pesticide exposure. First of all, it is important to understand how pesticides can affect you, as well as your legal rights in the workplace.

Take Away Message: It is important to **report** pesticide related illnesses and injuries to your supervisor, doctor, and local regulatory agencies.

Why?:

- Get help for injured workers
- Draw attention to unsafe conditions
- Incomplete reporting distorts view
- May lead to misdirected efforts

Also understand why reporting is so difficult for some people:

- **Fear**
 - Disclosure of undocumented status
 - Potential for retaliation
- **Ignorance**
 - Available resources (i.e. not having health insurance)
 - Language barrier

- “Machismo” or other commonly held beliefs

- **Preference**

- Seeking care in Mexico

What are my Rights? You have the right to:

- Know about pesticides that have been used recently where you work. The farmer and/or farm labor contractor must make available to you and keep records on the following:
 - When and where the pesticide was applied.
 - The restricted entry interval (REI)
 - The pesticide name
 - Active ingredient name
 - The EPA registration number
- See the pesticide records anytime you want without having to ask-your employer must tell you where this information is kept as part of your training
- Report unsafe work conditions without being punished or fired. Neither the farmer nor your employer will be told who made the complaint. Contact your **County Agricultural Commissioner’s** office by calling toll-free, **1-87PestLine (1-877-378-5463)**. Your call is confidential and you can report pesticide problems without giving your name. Make sure to have the name of the county where the pesticide exposure or incident occurred.
- File for worker’s compensation if you get sick or hurt at work.
- Worker’s compensation will pay for your medical cost, and sometimes, lost pay.

- Look at Material Safety Data Sheets (MSDS) and records for all pesticides used where you work. (Distribute MSDS handout)
- Know when some fields are being treated with pesticides through special field postings (some fields to be treated with certain pesticides are required by the label or regulation, or both, to be posted with special signs (see box). Posting signs must include:
 - Identification of the treated area
 - Time and date of the application
 - Restricted entry interval and;
 - Product name, EPA registration number and active ingredients (Receive Decontamination handout)

When field posting is required, signs must be posted before an application can begin. The signs must be posted so they can be seen at all usual points where people would be able to enter the treated field or green house.



DISCUSSION: If you were going to explain workers' rights to a friend, what would you say?

STEPS

STEP 1: Divide into groups of 2-4 people

STEP 2: Have one group member explain workers' rights. The other group members will be the "friends" learning about workers' rights.

STEP 3: Practice a skit on how to explain workers' rights.

STEP 4: Present your skit to the larger group.

REI

Restricted Entry Interval (REI)
is the time after a pesticide is used that you are **not allowed to go into the treated field.** Usually you must not go into a field until the REI is over.

When a pesticide requires a REI, the label specifies the lapse before people can re-enter a treated field.

If you see a sign like the one below, it means **STAY OUT OF THE FIELD.**



The safety of your family is in your hands. **Protect it from pesticides.**



By the end of this lesson, participants will be able to:

- Explain farm workers' rights
- Identify and understand the REI sign
- Explain 3 ways to stay safe at work



Notes

Lined area for taking notes, resembling a spiral-bound notebook page.

MODULE 5

Pesticides in and Around the Home

LEARNING OBJECTIVES

To train and educate CHW/P on:

- Keeping pests out of their homes
- Removing pests from their homes
- Using pesticides safely
- Alternatives to pesticides

ACTIVITIES

- Discuss some of the old remedies your parents or grandparents once used to get rid of pests and how those practices differ from the new methods now used. Learn about safer, less toxic or alternative methods for controlling pests.
- Watch video *Bug Party*
- Discuss if you have applied pesticides in or near your home. What are some ways you could protect your children from being poisoned or exposed to pesticides?
- Watch video *Bugs Out*

CHW/P MATERIALS

- Participants Guide
- Evaluation



The safety of your family is in your hands. **Protect it from pesticides.**

Try to prevent those little critters from getting into your home in the first place.

5.1 Alternative methods to using pesticides for pest control or Integrated Pest Management (IPM).

One of the best ways to protect yourself from pesticides used in and around the home is to **AVOID USING THEM!** Try to prevent those little critters from getting into your home in the first place. Here are some steps you can take to prevent pests from entering:

Dry them out! Insects, mice, rats and lots of other pests need water just like we do. Fix leaky pipes and faucets.

Keep them out!

- Put screens on windows.
- Repair screens.
- Patch holes or cracks.
- Put screens on pipes or vents.

What are the safest ways to get rid of pests? Here are some simple tips to control pests:

COCKROACHES

1. Find them

2. Deny them shelter, food and water

3. Determine best methods to control them

1. Find them:

- Look for evidence of cockroaches, such as living or dead roaches, their egg cases, or their feces (small dark brown pellets)

- Place sticky traps in areas where you suspect the cockroaches are living, like under a sink, behind the refrigerator or stove, or in the back of a kitchen cabinet
- Place the traps against the wall because roaches like to stay along the edges of floors.
- Check on the traps during the next week or two and dispose of them when they have collected a large amount of roaches.

Discuss some of the old remedies your parents or grandparents once used to get rid of pests and how those practices differ from the new methods now used. Learn about safer, less toxic or alternative methods for controlling pests.

2. Deny them shelter, food and water

Shelter

- Cockroaches live in small tight places and prefer to live on porous surfaces like wood, paper, cardboard, insulation and cloth. Focus your efforts on areas where you caught the largest number of roaches in the sticky traps.
- Deny them shelter by organizing storage areas and cleaning all surfaces (removing clutter).
- Seal all cracks and crevices with silicone caulk.
- Put screens over vents and pipes that open to the outside.
- Seal spaces around corners and pipes.



Food

- Seal up boxes and bags of food.
- Don't leave pet food and water bowls out overnight.
- Pick up dirty dishes and clean and dry them right away.
- Wipe up spills and crumbs.
- Keep a tight lid on the trash can and take out the trash often.

Water

- Drain dishwater from the sink.
- Fix leaky faucets and plumbing.
- Empty excess water in flower pots and plant stands.
- Insulate cold water pipes to prevent condensation.

3. Determine best methods to control them by visiting the University of California IPM website:
www.ipm.ucdavis.edu

ANTS

To get rid of ants in your home:

1. Find their point of entry and seal it.

Follow the trail of ants until you find where they are entering your home.

- Prevent their entry with fresh lemon juice and peel, chalk, damp coffee grounds, bone meal, charcoal dust or cayenne pepper.
- Temporarily seal the area with Vaseline®, until you can permanently seal it with silicone caulk.
- Spray or wipe the area with soap and water or solution of half vinegar and half water in areas where there are a lot of ants.

2. Destroy the nest

3. Determine best methods to control them by visiting the University of California IPM website:
www.ipm.ucdavis.edu

FLEAS

If you have a pet with fleas, try to control the fleas:

- Groom your pet with a flea comb to inspect for and remove fleas.
- Vacuum often and throw away the bag.
- Wash pet bedding in hot water once a week.
- Use soap and water to clean your pet's sleeping areas. Shampoo your pet regularly with plain soap and water or grooming shampoo (without pesticides).

The safety of your family is in your hands. **Protect it from pesticides.**



If these steps are not enough, please visit the University of California IPM website: www.ipm.ucdavis.edu

MOSQUITOES

The most effective way to reduce a local mosquito population is to remove their breeding areas in sources of standing water, such as old discarded tires, clogged gutters, planters, bird baths, or tree stump holes. Empty children's swimming pools when not in use. Other easy steps to consider include:

- Use screens on windows or repair torn screens
- Keep grass cut short and trim shrubs to minimize hiding places for adult mosquitoes.
- Wear a hat and light-colored, loose-fitting clothing (avoid wearing bright colors or flowery prints).
- Avoid using scented soaps and shampoos, lotions, oils or perfumes, including tanning products.

- Consider appropriate lighting—regular light bulbs attract mosquitoes, while florescent lights neither attract nor repel them.

Bug Repellents

If you choose to use a commercially available bug repellent product, carefully read and understand the complete label before using.



DISCUSSION: Watch video *Bug Party*

STEPS

STEP 1: Watch *Bug Party* video

STEP 2: After video, identify ways to keep your homes pest free. Tell these to the trainer so she/he can write them on the board. Reference the tips above.

5.2 When we have no choice ... how do we safely use pesticides?

If you have tried everything to get rid of pests and nothing is working, then it may be necessary to use a pesticide. Here are some safety tips:

Use the **least** toxic method of pest control.

1. Read the label and follow the directions.
2. Try using traps (like ant traps or roach traps) and baits first.

3. Use the pesticide for the pest that it is designed to control.
4. Keep any pesticide, trap, or bait out of the reach of children!
5. Make sure food, dishes and utensils are put away or covered in the areas where pesticides are being used.
6. Wear protective clothing such as long sleeved shirts and pants and rubber gloves.
7. Use sprays as a last resort.
8. Avoid using household “bombs” or pesticide products that spray an entire house or room at one time.
9. Hire a professional pest-control applicator or business for more serious problems, such as termites.

Discuss if you have applied pesticides in or near your home. What are some ways you could protect your children from being poisoned or exposed to pesticides?



DISCUSSION: Watch video *Bugs Out*

STEPS

STEP 1: Watch *Bugs Out* video

STEP 2: After video, identify ways to use safe alternatives to pesticides at home. Tell these to the trainer so she/he can write these on the board.

The safety of your family is in your hands. **Protect it from pesticides.**



By the end of this lesson, participants will be able to:

- Identify at least 3 ways to keep pests out of the home
- Describe at least 2 ways to get rid of pests safely
- Identify basic safety measures when using pesticides at home



Notes

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MODULE 6

Conclusion and Resources

 **DISCUSSION:** Take home point—When pesticides are used, be careful and read and understand the label. Pesticides can easily be misused!

STEPS

STEP 1: Lights will be turned off.

STEP 2: After it is dark, look around at your peers, yourself, and the room and see where the pesticides have spread. Share your thoughts on how easily the dust was transferred and spread.

6.1 Resources

- Visit thesafetyofyourfamily.com and see how to access all of the materials covered today
- Receive Wallet Cards
- Receive CPCS and DPR materials



The safety of your family is in your hands. **Protect it from pesticides.**

Where and How to Report Pesticide Exposures and Get Help

California County Agricultural Commissioners

This site allows you to input your zip code and find your local county agricultural commissioners office. You should report any pesticide exposure or unsafe work conditions related to pesticides.
www.cdfa.ca.gov/exec/county/countymap/

California Department of Pesticides

Report pesticide exposures, get data about pesticides in your county and find education materials in English and Spanish.
www.cdpr.ca.gov (English)
www.cdpr.ca.gov/docs/dept/spanish/translations.htm (Spanish)

California Poison Control

If someone has swallowed, touched or breathed in something harmful you can talk to a medical expert for free over the phone anytime day or night. Call 1-800-222-1222 for help in English, Spanish and over 100 other languages. You can also order free education materials at www.calpoison.org.

You can call 1-800-222-1222 24 hours a day from anywhere in the U.S. and you will be connected to a medical expert who can help you with a pesticide exposure or poisoning.

Information on Pesticides Used in California

Pesticide Action Network

Find out which pesticides are used in California by crop, chemical and geographic area.
www.pesticideinfo.org

Information on Pesticides

U.S. Environmental Protection Agency

Information on pesticides in English and Spanish.
www.epa.gov/pesticides/health/index.htm (English)
www.epa.gov/oppfead1/Publications/catalog/spanishresources.htm (Spanish)

National Pesticide Information Center

Information on pesticide products, first aid, safety, health and environmental effects, clean-up and disposal.
<http://npic.orst.edu/ingred/index.html> (English)
<http://npic.orst.edu/index.es.html> (Spanish)

How to manage pests without using pesticides

University of California Statewide Integrated Pest Management Program

www.ipm.ucdavis.edu/index.html

Californians for Alternatives to Toxics

www.alternatives2toxics.org

Beyond Pesticides

www.beyondpesticides.org

Bio-Integral Resource Center

www.birc.org

San Francisco Environment Guide for Integrated Pest Management

www.sfenvironment.org/download/pest-prevention-by-design-guidelines

Tools and Resources for Educating the Community

Migrant Clinicians Network

Info on best clinical practices in migrant and community health centers.

www.migrantclinician.org/toolsource/235/pesticides/index.html

Pesticide Education Center

Information on health effects and safer alternative pest control methods.

www.pesticides.org

Shoppers Guide to Pesticides in Produce

Find out which fruits and vegetables are safest from pesticides and which to buy: Dirty Dozen and Clean 15.

www.ewg.org/foodnews

Pills vs. Candy

A fun online game that teaches kids and parents that pills and candy can look very much alike. Post your score to Facebook or Twitter and save the California Poison Control Number in your cell phone.

www.pillsvscandy.com

www.pillsvscandy.com/espanol/

Download the free App for iPhone

<https://itunes.apple.com/us/app/choose-your-poison/id419949128?mt=8>

and for Android

https://play.google.com/store/apps/details?id=edu.ucsf.telemedicine.mhealth.chooseyourpoison&feature=search_result?&tag=GLVhbHRoLmNob29gZXlvdXJwb2lzb24iXQ

Free Weekly Text Messages with Tips on Home and Family Safety

Text TIPS to 69866

For Spanish text AVISOS to 69866

Talking Points for Pesticide Videos

Pesticide Basics

A pesticide is any chemical that someone uses to keep away or kill pests. Pests are bugs, like cockroaches, ants and flies, mice, rats or weeds that grow outside. Even germs can be considered pests.

- Pesticides may help get rid of pests, but they can also be harmful to people, animals and the environment.
- Even a household cleaner like bleach, glass cleaner or a product that says it kills germs, is considered a pesticide if it's used to get rid of pests.
- All of these products can be dangerous if you do not follow the directions on the label.

The safety of your family is in your hands. Protect it from pesticides.

- The most important thing to do is read the label and follow the directions.
- There are different pesticides for different pests. The label tells you what the pesticide is for and how to use it.
- Pesticides are more dangerous to children, older adults and pregnant women.

Pesticides and Health

Pesticides can be dangerous if they get in or on the body. How dangerous depends on the type of pesticide, the amount, and how long the pesticide gets into or on the body. You can't always see or smell a pesticide. If you use a pesticide at home to kill bugs, work on a farm or live in a farming area, it's important to know the signs of pesticide exposure.

If a pesticide gets on the skin or in eyes, or someone breathes in a pesticide, these are the signs to look out for:

- Runny nose or drooling
- Trouble breathing or pain in the chest
- Diarrhea, nausea or vomiting
- Muscle cramps, pain or twitching in the legs or arms
- Rashes, bumps, blisters, burning or itchy, red skin, sweating too much.
- Headaches, trouble seeing, small pupils
- Damage fingernails, numb and tingling fingers
- Feeling confused, weak or nervous, having trouble concentrating or sleeping

If someone has been exposed to a pesticide it is important to:

- Read the pesticide labels for any first aid information
- If the pesticide is on your clothes, take off clothing and wash the exposed skin or eyes with clean water
- Go to a doctor or clinic for care
- Call the free 24-hour poison control line for help in any language
- If it happens at work tell a supervisor right away, they must help you get medical attention

If you see anyone with these very serious symptoms call 911 right away

- Being unconscious
- Losing control over bladder and bowels (going to the bathroom without control)
- Blue lips and fingernails
- Shaking

Pesticides at Work

Farm workers can come into contact with pesticides while at work. For their health and the health of their family, it's important that they protect themselves. **If a farm worker has come into contact with a pesticide or is showing signs and symptoms of being exposed to pesticides, it is very important to report it.**

To report a possible pesticide exposure, call your local County Agricultural Commissioner's office. You can get the number and be connected by calling toll-free **1-877-378-5463**. Your call is confidential and you can report pesticide problems without giving your

name. Make sure to have the name of the county where the pesticide exposure happened.

If you think you may have been exposed and want to talk to a medical expert for free over the phone anytime, day or night, call **California Poison Control** at **1-800-222-1222** in Spanish and over 100 other languages.

If a farm worker thinks that pesticides have made them sick at work, the employer must make sure that they are taken to the doctor immediately.

Getting ready for work

- Wear long pants and a long sleeve shirt
- Put on a hat and cover your neck and mouth
- Wear sunglasses or safety glasses
- If possible, wear gloves
- Wash hands before eating
- Watch out for signs that an area has been sprayed with pesticide and keep out

After work

- Wash hands with soap and water
- Change out of work clothes and work shoes
- Put work clothes in a bag separate from other clothes
- Never go into the house with work shoes on
- Don't hug or touch children if you are wearing work clothes
- Shower after work
- Wash work clothes separately from the rest of the family clothes

- Never take pesticide or empty pesticide containers home from work
- Never use pesticide containers for food, water or anything else

Farm Worker Rights

- Farm workers have the right to know what pesticides have been used and when they were used
- The work site must keep records of the pesticide name, active ingredient and EPA registration number and allow workers to see the records
- Workers have the right to see the pesticide records anytime and also to:
 - Report unsafe work conditions without being punished or fired
 - File for worker's compensation
 - Look at Material Safety Data Sheets (MSDS)

Pesticides In and Around the Home

There are many ways to get and keep pests out of the home without using chemicals. This is called Integrated Pest Management or IPM. Pests want food, water and shelter, so make sure they can't find that in the home.

- Put all food away and don't leave it out on counters
- Wipe crumbs from counters and off of the floor, keep both surfaces clean
- Even water attracts pests, so wipe up spills right away, fix leaks and don't leave glasses of water out
- Take out the trash

The safety of your family is in your hands. **Protect it from pesticides.**

- Get rid of fleas on cats and dogs by brushing and bathing your pet, vacuuming the home and washing anything the pet sleeps in and plays with
- Keep mosquitoes away by getting rid of water, like puddles or leaks, near windows and doors
- Put screens on the windows and fix any holes in screens with household cement, clear nail polish or patch screen material to keep bugs out
- Keep the grass cut short and shrubs trimmed also helps keep bugs away
- If you are outside, wear a hat and clothes in light that fit loosely
- Don't use scented soaps and shampoos, lotions, oils or perfumes, including tanning products
- If you need to use a bug spray read the label slowly and carefully. If you need help get someone else to read it and explain the directions, or ask a promotora for help if there is one in your neighborhood.

When you have no choice, how do you safely use pesticides?

Start with the least dangerous way

- Always read the label and follow the directions.
- Never use a product for a different pest than it says on the label
- Try traps or bait first, use sprays only as a last resort
- Avoid using household “bombs” or products that spray an entire house or room

- Keep pesticides, traps and bait out of the reach of children
- Make sure food, dishes and utensils are put away or covered before using a spray
- If using a professional pest-controller for more serious problems, like termites, be sure to they are a licensed exterminator. All businesses and even individuals who do home pest treatments must have a license from the California State Structural Pest Control Board. You can check to see if a business has a license online at www.pestboard.ca.gov/license or by calling **1-800-737-8188**.
- If you rent, your landlord must make sure your home doesn't have pests and must hire a professional exterminator if necessary. If you see mice or rats in your home, tell the landlord right away.

6.2 Questions and Good-byes

6.3 References

Migrant Clinicians Network

P.O. Box 164285, Austin, TX 78716

www.migrantclinician.org

512.327.2017

La Familia Sana Promotora Program

Pesticide Education Program Trainers Manual

Quandt SA, Trejo G, Grzywacz J, Arcury TA

Winston-Salem, NC: Wake Forest School of Medicine, 2011

MODULE 7

Glossary of Terms

Acute symptoms Symptoms that begin quickly or only last a short period of time

Active ingredients Components of a chemical product which help directly in achieving the product's performance objectives.

Antibacterial pertaining to a substance that kills bacteria or inhibits their growth or replication.

Cholinesterase inhibitors Certain chemical classes of pesticides, such as organophosphate and carbamate insecticides, that target the portion of the nervous system that uses the signaling compound, acetylcholine, to stimulate nerves.

Chronic toxicity The capacity of a substance to demonstrate toxic effects as a result of repeated exposure over a period of time.

County Agricultural Commissioner (CAC) A person who has direct authority over all pesticide related activities within their respective county. The goal of the Commissioner is to insure that pesticides are applied safely and legally.

CPCS-California Poison Control System A non-profit organization dedicated to the prevention of poisoning and providing clinical advice to the public and healthcare providers should a poisoning occurs. The emergency phone number is 1-800-222-1222

Disinfectant a chemical substance that is used to kill harmful germs and bacteria; a substance that disinfects something.

Dose an amount of a substance.

DPR-Department of Pesticide Regulation A Department within the California Environmental Protection Agency with the mission to protect human health and the environment by regulating pesticide sales and use, and by fostering reduced-risk pest management.

Drift movement of substance or object in a direction different from the one desired because of air or water currents

Duration the length of time that something (a substance, exposure, etc) exists or last.

Fungicide a substance that controls fungi

Herbicide a chemical used to control weeds, or stop their growth.

Humoral Medicine the belief that hot and cold must never be mixed or illness will occur. This leads to the notion that if you have been working in the hot sun, you should not wash your hands with cold water

The safety of your family is in your hands. **Protect it from pesticides.**

Inactive ingredients any component that is not the active ingredient. Inactive ingredients are used to fulfill a variety of purposes, from delivering the active ingredient to making the product easier to apply.

Insecticide a chemical substance that is used to control insects.

Interaction the action or influence of a substance on one another.

IPM Integrated Pest Management is a pest management strategy that focuses on long-term prevention or suppression of pest problems through a combination of techniques such as monitoring for pest presence and establishing treatment threshold levels, using non-chemical practices to make the habitat less conducive to pest development, improving sanitation, and employing mechanical and physical controls.

KOORC Keep Out of the Reach of Children

Local effects an adverse health effect that takes place at the point or area of contact.

Material Safety Data Sheet (MSDS) As part of hazard communication standards (right-to-know laws), federal and state Occupational Safety and Health Administrations (OSHA) programs require manufacturers and importers of chemicals, such as pesticides, to prepare and provide health and safety information about their products.

National Agricultural Workers Survey (NAWS) An employment based, random survey of the demographic, employment, and health characteristics of the U.S. crop labor force. The information is ob-

tained directly from farm workers through face to face interviews.

Penalties punishment for breaking a rule or law.

Pest Any living organism that interferes with or threatens human, animal or plant health, property or the environment.

Pesticide a chemical that is used to control animals, weeds, diseases or insects that may damage plants, crops or harm the environment.

Poisoning to injure or destroy with a poison.

Poison Any substance that impairs health or destroys life when ingested, inhaled, or absorbed by the target organism.

Pyrethrin and pyrethroid insecticides chemicals in insecticides that affect the sodium channel in some parts of the nervous system, including nerves on the skin and in the airways. When they are swallowed or inhaled they can also affect the nerves in the brain.

Reaction a biological response after being exposed to a situation or event.

REI - Restricted Entry Interval is the time after a pesticide is used that you are not allowed to go into the field.

Rodenticide a chemical substance used to control rodents (rats, mice, etc.)

Route of Exposure the way chemicals get into the body.

Spill an accident in which liquid may flow over the edge of a container and spread out into a wider area:



- A serious spill could even involve fire and the explosion of leaking containers. With major pesticide spills, it is better to let emergency responders to contain and clean up the spill. They have training and equipment to safely handle such emergencies.
- Household pesticide spills can be cleaned up by you. Do it right away—sprinkle the spill with sawdust or cat litter and sweep it into a paper bag. You can call your County Agricultural Commissioner or county office of environmental health to ask how to dispose of the bag. The product label may also include disposal information. Many communities have hazardous waste collection facilities. Go to www.earth911.org to find the one closest to you.
- **Do not hose down the spill. Runoff can damage plants or pollute rivers and streams.**

Systemic effects related to, or affecting the entire body.

“Teach back” method a facilitation technique that helps a CHW/P confirm that they have explained the information clearly and correctly by having participants explain the information back to them.

Toxicity the degree to which something is poisonous.

US EPA United States Environmental Protection Agency the federal governmental agency charged with protecting human health and the environment.

US EPA Registration Number A number that appears on all registered pesticides sold in the United States. It is usually found on the front and/or back panel of the label along with detailed instructions for use.