

La Familia Sana: Promotora Program

**Participant Manual
Pesticide Education Program**



Developed by:

Sara A. Quandt, PhD

Grisel Trejo, MPH

**Division of Public Health Sciences
Wake Forest School of Medicine**

Joseph G. Grzywacz, PhD

Thomas A. Arcury, PhD

**Department of Family and Community Medicine
Wake Forest School of Medicine**

Funded by:

**National Institute for Occupational Safety and Health
Grants OH009579, OH07611**

**National Institute of Environmental Health Sciences
Grant ES08739**

For information contact:

**Sara A. Quandt, PhD
Center for Worker Health
Wake Forest School of Medicine
Medical Center Boulevard
Winston-Salem, NC 27157
336-716-6015
squandt@wakehealth.edu**

**Copyright 2011
Wake Forest School of Medicine**

Suggested citation: Quandt SA, Trejo G, Grzywacz J, Arcury TA. La Familia Sana Promotora Program. Pesticide Education Program Participant Manual. Winston-Salem, NC: Wake Forest School of Medicine, 2011.

Lesson 1

Protect Your Family

- *A Pesticide Is...*
- *How Children Are Exposed to Pesticides*
- *Long Term Chronic Effects from Pesticide Exposure*
- *Protect Yourself from Pesticide—Guide for Agricultural Workers*
- *Video: A Safe Place for your Children*

A **PESTICIDE** is any chemical that is used to control pests.
 Many people use pesticides in their yards and **HOMES**.

PESTICIDES may come in many forms:



Spray



Bombs



Gels



Ant traps



Liquids

Pesticides are used to kill many kinds of **PESTS**:



Rodents



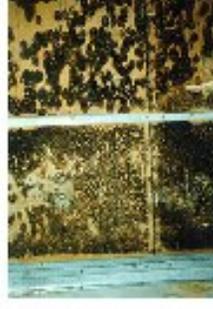
Cockroaches



Ants



Flies



Mold

A **PESTICIDE** is any chemical that is used to control pests.

Many people use pesticides while working in agricultural **FIELDS**.

PESTICIDES are applied in different ways:



Tractor



Backpack



Airplane

Pesticides are used to kill many kinds of **PESTS**:



Weeds



Insects



Rodents



Diseases

How Children Are Exposed to Pesticides

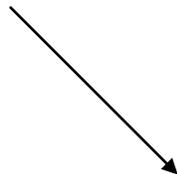
From the field...



Worker applies pesticides in the field..



Worker enters home in work clothes and boots.



Toy on floor picks up pesticides.



Child plays with toy.

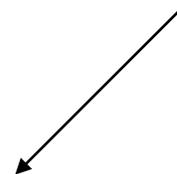
In the home...



Insects get into the home.



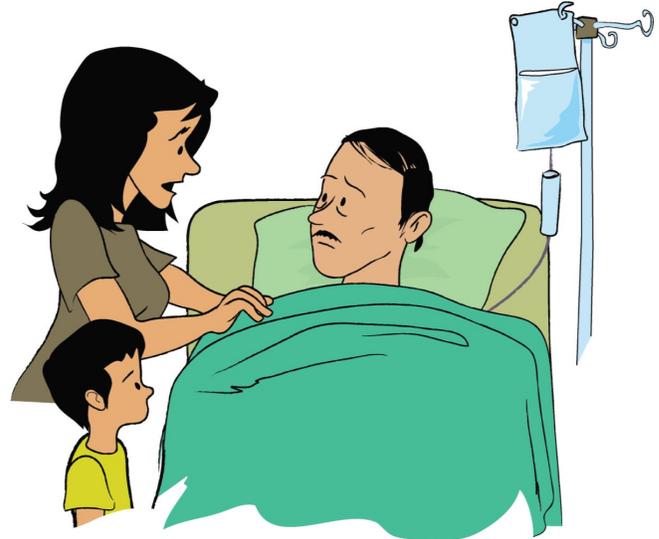
Pesticides are used in the home.



Long-Term Chronic Effects of Pesticide Exposure



Loss of muscle control



Cancer and/or organ damage



Spontaneous miscarriages and birth defects



Sterility

Lesson 2

Keep Pesticides Out!

- *El Terror Invisible*
- *Pesticides - Leave Them at Work!*
- *Comic: Pesticides Nearby...But Staying Healthy*

Lávate las manos en el campo,
antes de comer, beber o ir al baño.

1 Siempre
lleva
puesta
camisas
de manga
larga.



3 Lava la
ropa de
trabajo
antes de
volvértela
a poner.



¡Si te toca, te
toca!
¿Por qué
cuidarse?

Porque la tienes
control y puedes
reducir las
probabilidades
de enfermarte.



Para mayores informes o solicitar
ayuda, por favor comunícate con:

Keeping Workers Safe from
Pesticide Exposure

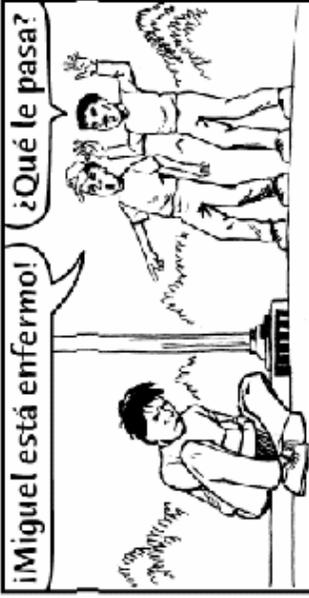
Producido por El Proyecto PACE
(Preveniendo el Contacto con
Pesticidas entre los Trabajadores
Agrícolas)

Dibjuos por Tim Rickard

© 2000 Wake Forest University
School of Medicine
Department of Family and
Community Medicine

The PACE Project (Preventing
Agricultural Chemical Exposure)
Medical Center Blvd., Winston-
Salem NC 27157-1084





¡Miguel está enfermo!



Él es otra víctima del terror invisible



Hace poco fui a un entrenamiento...

...en el que aprendimos sobre los residuos de los pesticidas.

Los pesticidas en las plantas son invisibles.

Los residuos se quedan en las plantas por muchos días.

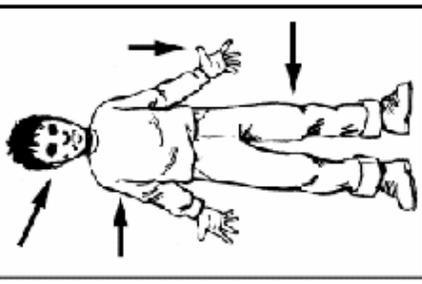


Y aunque no los puedes ver ni oler, de todas maneras hacen que te enfermes.

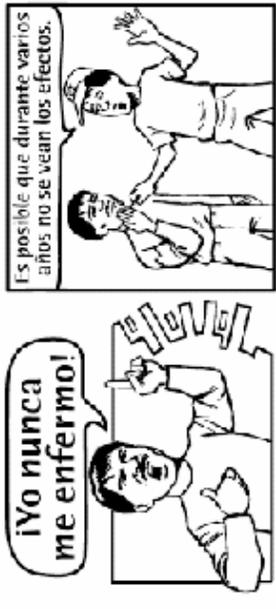


Aunque el contacto sea con pequeñas cantidades, el residuo se va acumulando con el paso del tiempo.

Cuando tocas las plantas, estás en contacto con los residuos.



Pero son imuy peligrosos!



¡Yo nunca me enfermo!

Es posible que durante varios años no se vean los efectos.



Cáncer

Esterilidad



Daño a bebés que aun no han nacido.



Todos los que trabajan en el campo corren el riesgo.



¿Cómo podemos protegernos?

PESTICIDES -

LEAVE THEM AT WORK!



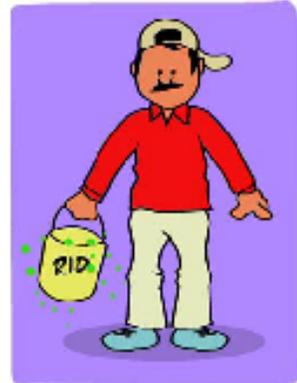
A pesticide is any chemical that is used to control pests.
The pest could be mold, a weed, a bug or a mouse.

There are many ways pesticides can come home with you from work.

In pesticide containers

On your boots and clothes

On your body



On fruits and vegetables

Lesson 3

Clean Pesticides Out!

- *Pesticide Exposure Mapping*
- *Cleaning Pesticides Out of Your Home*
- *The Farmworker's Guide to Laundering Work Clothes*
- *Song: Para Lavar La Ropa*

PESTICIDE EXPOSURE MAPPING



Where are your children exposed to pesticides in your home?

Pesticide exposure mapping is a way to learn where your child might be exposed to pesticides in your home.

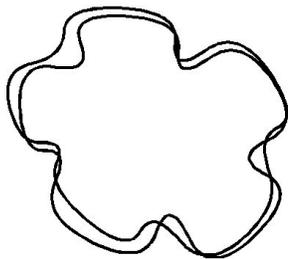
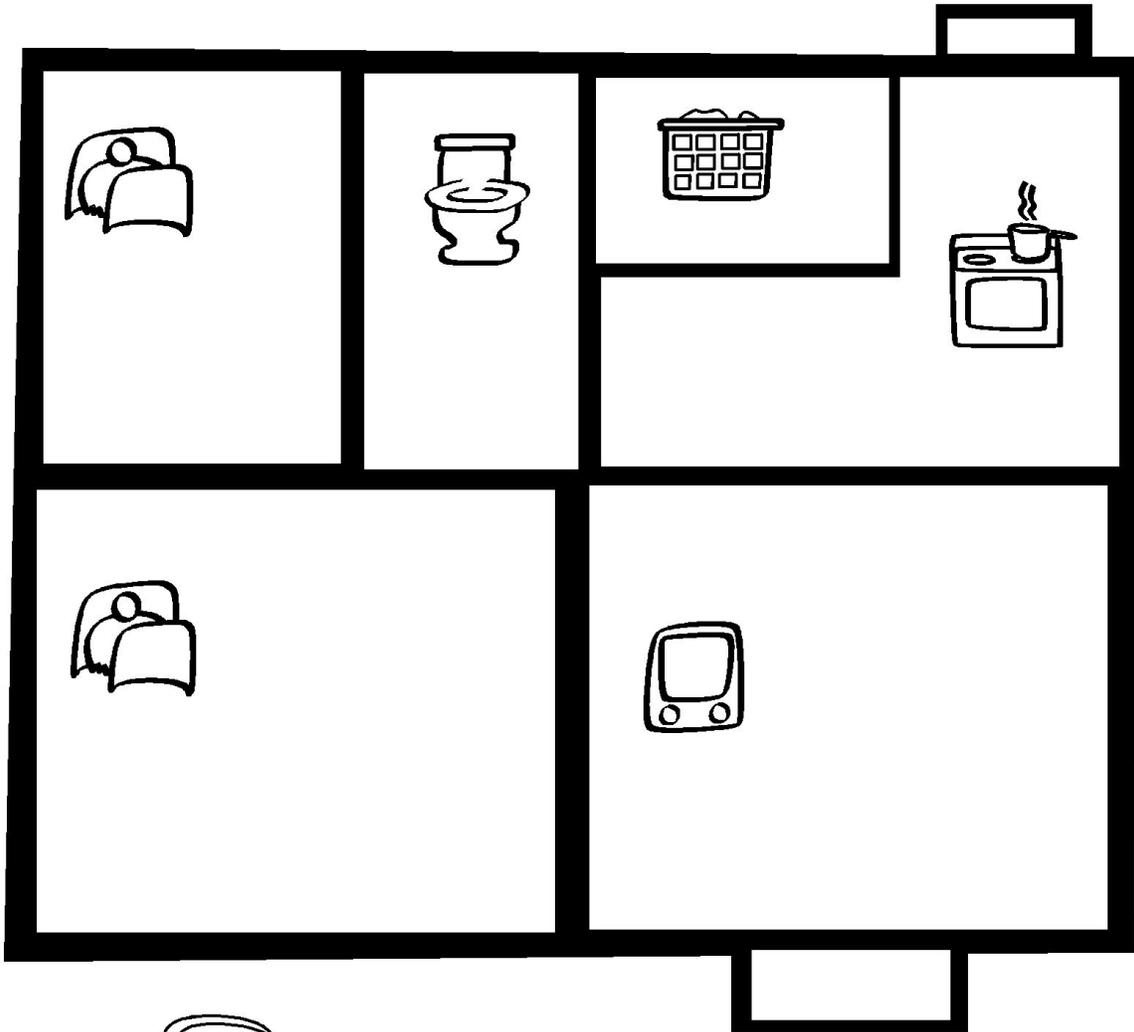
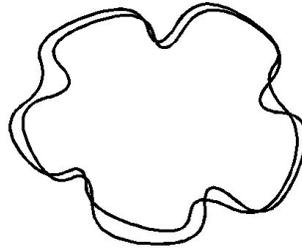
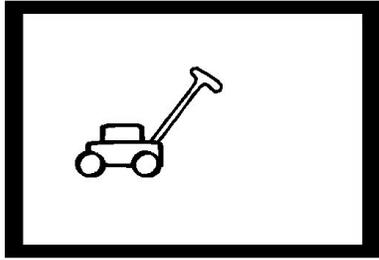
A pesticide exposure map shows (1) where your children might be exposed to environmental pesticides, and (2) where your child might have direct access to pesticide containers (as well as other dangerous chemical containers). There are three parts to making a pesticide exposure map for your home.

1. Draw a simple map of each room in your house and yard. There is an example on the back of this page.
2. Watch your children for several days and mark on the map where your children spend time eating, sleeping, playing and watching TV. Look around these places and think about what else usually happens there.
 - Are they places in which adults walk when they first come home from work?
 - Are they places in which adults change out of their work clothes?
 - Are they places where adults leave or store their dirty work clothes?
 - Are they places where you spray pesticides for bugs? Or where you put poison for mice and rats?
 - Are they parts of your yard where insect or weed killers are sprayed?
 - Are they places where your landlord or employer sprays pesticides?

Each of these are the kinds of places where your children can be exposed to environmental pesticides!

3. Look at the world from your children's point of view. For example, get on your hands and knees in all of the places your children go in your home and yard. You can now see the world the way your children see it. Look around. What do you see?
 - Are there pesticide containers on counter tops and tables that you can reach?
 - Are there unlocked cabinets and shelves with pesticides and chemicals in your reach?
 - Can you reach dirty work clothes?

Each of these are the kinds of places where your children can be exposed directly to pesticides and other dangerous chemicals!



For More Information Contact:
WAKE FOREST
UNIVERSITY
 (336) 716-4982

Thomas A. Arcury, PhD
 Sara A. Quandt, PhD
 Drawings by: C.M. Lane, Jr., M.A.

Copyright 2003
 Wake Forest University
 School of Medicine

Supported with grants from:
 National Institute of Environmental Health Sciences
 (R01 E508739)
 and
 Syngenta Crop Protection, Inc.

Cleaning Pesticides from your Home



No matter how many precautions you take, agricultural pesticides (pesticide residues) can still get in your home!

Once in your home, pesticides can last a long time because they are not exposed to the sun and the rain.

You can get these pesticides out of your house by keeping your house as clean as possible!



- *Vacuum* your carpets and upholstered furniture as often as you can.
- *Wash* your throw rugs.
- *Wash* the kids' toys too.
- *Sweep* uncarpeted floors regularly.
- *Mop* uncarpeted floors regularly. When you mop, rinse your mop often and change the mop water often.
- *Dust* surfaces including out-of-the-way places, like the top of the refrigerator, behind the refrigerator, and underneath the beds.



The Farmworker's Guide to Laundering Work Clothes

Even if you do not spray or handle pesticides, you may work around treated crops. You are also exposed to dust, plant toxins, and other irritants. These irritants can build up on clothing, causing skin irritations. Build up can be avoided by using the safe laundering practices discussed below:

If you do not wash your used work clothes immediately, put them in a basket separate from the family laundry. Never wash your children's clothes with work clothes.



Wash your work clothes with hot water and detergent before using them again. Wash them separately from the family laundry.

Wash your hands and arms after putting your work clothes into the washer.



Hang clothes on a clothesline to dry. Sunlight helps get rid of any remaining chemicals. Be sure to dry clothes completely.

Para Lavar La Ropa: La canción



Para lavar la ropa
Para lavar la ropa
Se necesita agua caliente
Agua caliente y detergente

Hay arriba y arriba
Hay arriba y arriba
Y no mezcle
Y no mezcle la ropa del resto de la familia

Para lavar la ropa
Para lavar la ropa
Se necesita agua caliente
Agua caliente y detergente

Hay arriba y arriba
Hay arriba y arriba
Tenga dos canastitas
Lista para guardar su ropita

Para lavar la ropa
Para lavar la ropa
Se necesita agua caliente
Agua caliente y detergente

Hay arriba y arriba
Hay arriba y arriba y no mezcle la ropa
De sus niños con la del trabajito

Para lavar la ropa
Para lavar la ropa
Se necesita agua caliente
Agua caliente y detergente

Hay arriba y arriba
Y se la pone en el sol, seria mejor
Para acabar los pesticidas

Para lavar la ropa
Para lavar la ropa
Se necesita agua caliente
Agua caliente y detergente

Hay arriba y arriba
Hay arriba y arriba
Lave sus manos
Cuando termine su lavado

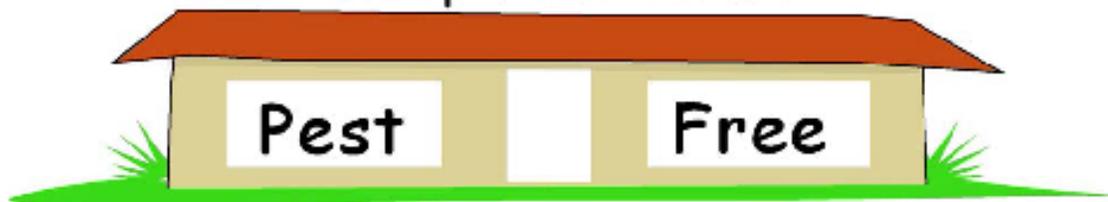
Hay arriba y arriba!

Lesson 4

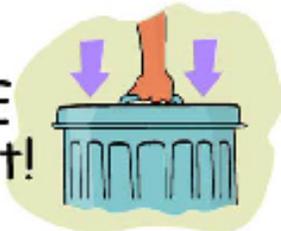
Controlling Pests Without Pesticides. Use Pesticides as a Last Resort.

- *A Pesticide Is ...*
- *Keep Your Home Pest Free*
- *How to Read a Pesticide Label*
- *Pesticide Alternatives*
- *How to Repair a Screen*
- *How to Patch Small Holes in Drywall*
- *How to Patch Large Holes in Drywall*
- *Send Pests Packing!*
- *Help! It's a Roach!*
- *Video: How to Control Pests*

Keep Your Home



**STARVE
them out!**



Bugs will eat just about anything. But, they might leave you alone if you don't give them easy access to food. So...

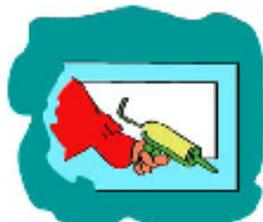
- ◆ Seal up boxes and bags of food
- ◆ Don't leave bowls of pet food out over night - keep it in a sealed container
- ◆ Pick up dirty dishes and clean them right away
- ◆ Wipe up spills and crumbs
- ◆ Keep a tight lid on trash

Bugs won't survive for long without water. So...

- ◆ Always drain dishwater from the sink
- ◆ Fix leaky faucets
- ◆ Empty excess water in flower pots and plant stands
- ◆ Wrap cold water lines with insulation to prevent condensation



**DRY
them out!**



**KEEP
them out!**

If you can keep bugs out of your home, you can prevent them from becoming a problem. Don't let them move in on you...

- ◆ Seal up cracks and openings along baseboards, behind sinks, and around windows
- ◆ Put screens over vents and pipes that open to the outside
- ◆ Seal spaces around corners and pipes

If you call a pest control operator, ask the following questions:

- ◆ Do you have a pest control certification?
- ◆ Before you exterminate, can you tell me what you will be doing?
- ◆ What chemicals will you be using?
- ◆ May I see the labels?
 - Does the product target the pest I want to control?
 - Is the pesticide approved by EPA for use indoors?
- ◆ When will it be safe for me to return?



For More Information Contact:
WALSH
INTEGRATED
(336) 716-6982

THOMAS A. ARUP, Ph.D.
SARA A. QUINN, Ph.D.
DANIELS Dr. M. LANE, Jr. M.A.

Copyright 2003
Wake Forest University
School of Medicine

Supported with grants from:
National Institute of Environmental Health Sciences
(R01 ES08739)
and
Syngenta Crop Protection, Inc.



**ALWAYS READ THE LABEL
BEFORE YOU USE A PESTICIDE!**

READ ENTIRE LABEL BEFORE USING THIS PRODUCT

DESTRUCTOR

Active Ingredients

Insectimure 0.02%

Other ingredients 99.08%



**KILLS
ANTS, ROACHES,
FLEAS, AND SPIDERS**

PRECAUTIONARY STATEMENTS

Caution

Avoid contact with skin and eyes.

Wash your hands with soap and water after using the product and before eating, drinking, or using the bathroom.

Remove contaminated clothing and wash it before wearing again.

First Aid

If product gets on skin, wash immediately with soap and water for 15 minutes.

Call a doctor or poison control center for treatment instructions.

When calling poison control or going to the doctor, have the product label available.

HAZARDOUS TO HUMANS AND DOMESTIC ANIMALS

KEEP OUT OF REACH OF CHILDREN



**In case of poisoning, call
the poison control center
at 1-800-222-1222.**

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

SHAKE WELL BEFORE USING

Indoors

Spray in areas where insects are generally found such as behind cabinets, in corners, and around doors, windows, and pipes.

Outdoors

For ants, completely soak the ant hills and trails. To kill insects in areas where there are weeds, spray infested areas thoroughly.

STORAGE AND DISPOSAL

Storage

Store in a cool, dry place away from heat and open flames.

Disposal

If empty, do not reuse the container. Place it in the trash.
If partially empty, never pour remaining product down any drain.
Call your local solid waste disposal agency for instructions on disposal.

Made by Yanoplagas, Inc., Sorita, NC 28123

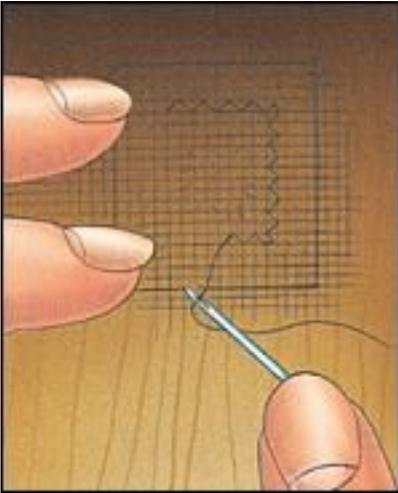
EPA Reg. No. 0000-000

How to Repair a Screen

Tools: Needle

Materials: Screen patches

1.



Repair holes in plastic or fiberglass screens by sewing a screen patch over the hole. Use the “threads” of the patch to sew it closed. Some small holes can be patched with super glue. Use super glue sparingly and wipe up any excess before the glue sticks.

2.



For holes in metal screens, trim any stray threads on the edges of the hole. Bend the wires on the edges of the patch and weave them through the wires of the screen around the hole. Sometimes small holes can be repaired by using a toothpick to rearrange the threads of the screen to cover the hole.

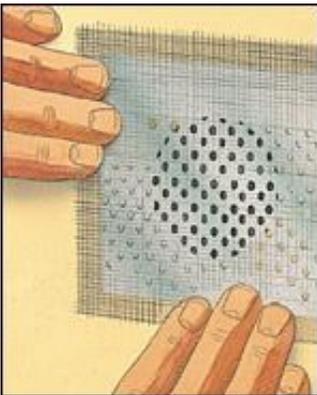
How to Patch Small Holes in Drywall

Tools: Putty knife

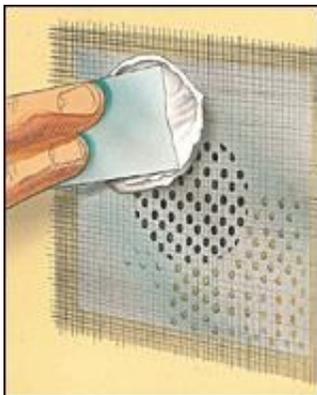
Materials: Drywall putty, drywall patch



1. Check the damaged area. If there are not any cracks around the edges of the hole, fill the hole with putty to resurface it. Let it dry and sand it smooth.



2. If the edges are cracked, cover the hole with a drywall repair patch. A drywall patch has a reinforced metal screen in the middle. Trim the patch to the size needed to cover the damaged area.

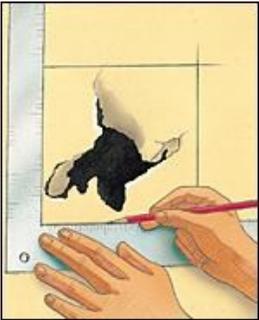


3. Cover the patch with drywall putty and let the area dry. Use a damp sponge to smooth the area; this will eliminate dust caused by sanding. Apply additional coats of putty as needed, and smooth them with a wide spatula or putty knife.

How to Patch Large Holes in Drywall

Tools: Carpenter's square, saw or utility knife, nail gun

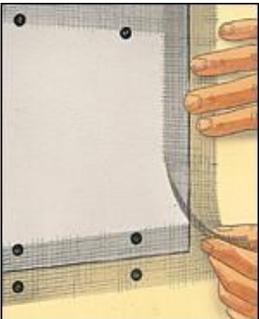
Materials: $\frac{3}{4}$ " plywood or other strips of wood, $1\frac{1}{2}$ " panel nails, drywall



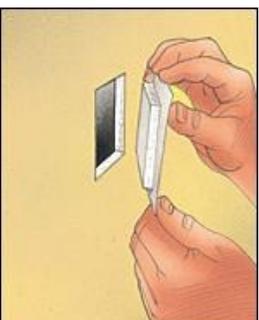
1. Draw a square around the damaged area using a metal carpenter's square. Use a jigsaw, panel saw or utility knife to cut out the square surrounding the damaged area.



2. To reinforce the wall from behind, cut strips of $\frac{3}{4}$ " plywood or other pieces of wood to the desired length and width, depending on the size of the damaged area. Install these strips behind the hole using a nail gun and $1\frac{1}{2}$ " panel nails to secure the strips in place.



3. Cut a piece of drywall the size of the hole and nail it to the support strips. Apply fiberglass drywall tape to the edges of the hole and apply a thin coat of drywall putty to the joints. Sand the area and apply additional coats of putty as necessary to achieve a smooth finish.



4. For holes that are smaller than 3" x 4", make a patch for the hole by cutting a piece of drywall from the back. Do not cut completely through the paper coating. Cut the paper to $1\frac{1}{2}$ " to 2" larger than the hole, and detach the excess drywall with a putty knife. Insert the patch and finish with putty.

LA FAMILIA SANA: PROMOTORA PROGRAM

PESTICIDE ALTERNATIVES

No or low-pesticide alternatives	
Ant traps	These traps have low levels of pesticides and do not cause harm to humans. Place these in the path of the ants. Usually, ants always follow their same path; therefore, it will be easy to identify places for the traps. Keep them out of reach of children.
Sticky or closed mouse traps	Identify areas where rodents frequent. These places are usually in or near the kitchen or trash. When the mice pass through the traps they will get stuck or trapped.
Fly strips	Place the strips in areas where mosquitoes or flies are. They can be placed on the ceiling near the light bulbs, by the windows, or any other place out of reach of children.
Boric acid	Boric acid is toxic in large quantities. It is recommended to be careful especially if children are present. Mix one-half cup of boric acid with a quarter of a cup of corn meal. Shape into small balls and place in strategic places that are out of reach of children. They take about 8 to 10 days to take effect. Another way to use it is by placing small amounts around the edges of the counters or floors where cockroaches frequent but always out of reach of children. Always wash your hands after handling boric acid.
Cockroach traps	Place these traps in strategic places that are out of reach of children. They can be placed behind the stove, furniture, refrigerator, or where children do not have access.

Tools	
Screen repair kit	This contains a piece of mesh that is used to repair door and window screens to prevent insects from coming into the house.
Caulk or spackling compound	This is used to plug holes on walls or floor to prevent insects from coming into the house.
Weather strip	This strip is placed at the edge of window or door frames to prevent cold or hot air, as well as insects from coming into the house. It is important to clean the application area so it can stick well.
Putty knife	This is a tool used with the caulk or spackling compound to patch holes.
Insulating foam sealant	This foam is used to plug leaks or holes under the sink, around pipes, or anywhere in the house. Apply enough foam to the area. It will harden as it dries. Follow instructions on the container.

Note: These tools are not expensive and can be found at any hardware store or a big chain supermarket.

Lesson 5

Pesticide Safety and Child Bearing

- *Are You Going to Have a Baby—or Thinking of It?*
- *Why Are Infants and Fetuses More Vulnerable to Pesticides than Adults?*
- *Lo Que Bien Empieza....Bien Acaba*

Are You Going to Have a Baby - or Thinking of It?



Pesticides can harm your unborn baby as well as you! Here's what you can do:

Avoid pesticides around the house.



If you do farm work, change clothes and shower immediately after work.



Don't go into a field in which pesticides have been applied.



Wash clothing worn at agricultural jobs separately from other family clothes.



If you handle pesticides - or clothes, boots, and other materials that have come into contact with pesticides, wash your hands.

Why are Infants and Fetuses More Vulnerable to Pesticides Than Adults?



A small amount of pesticides in an adult would be a large amount of pesticides in a child. This is because the child's body is smaller.

Children breath faster.
They take in more pesticides.



Children's organs are
developing rapidly, and pesticides can
harm that.

Children breath closer to
the ground where many
pesticide residues accumulate.



Children play on the floor,
where pesticide residues accumulate.
They put their hands and toys in their mouths.

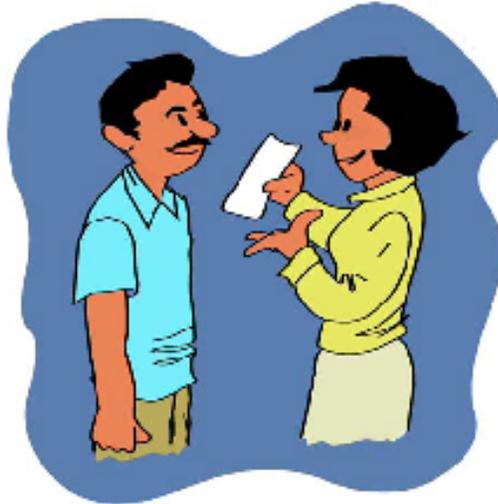
Lesson 6

Talk About Change

- *Talking About Change: How to Convince Others to Act Safely with Pesticides*
- *Protect Yourself from Pesticides—Guide for Agricultural Workers*
- Video: *El Terror Invisible*
- Video: *How to Control Pests*

TALKING ABOUT CHANGE:

How to Convince Others to Act Safely with Pesticides



1. Know the facts.
 - know how pesticides can harm children
 - know how pesticides can get into your house
 - know how pesticides can be removed from your house
2. Have written materials to support you.
3. Know what you want them to do -- have specific behaviors you want them to change.
4. Be positive -- tell people what they *should* do, rather than what they should *not* do.
5. Practice what you want to say with a friend.
6. Get help with the English if you need it.
7. Get someone to give you support.