

Health Education Outreach Handbook for Undergraduate Volunteers

2009 University of Connecticut
Migrant Farm Worker Health Clinics



University of Connecticut
Health Center

Preface:

Many injuries and illness associated with employment in agriculture have been documented through the years. Those employed in this occupation are at a much greater risk of death than workers in every other industry except construction.

Risks occur through work-related conditions, use of equipment and chemical exposure. The results can be seen in illness-related acute and chronic conditions, in severe disabilities, and in fatalities. Workers, their families, and particularly their children can be affected both at the work site and from contamination brought home. The National Institute of Occupational Safety and Health (NIOSH) convened a panel of experts in 1995 to set occupational health priorities for agricultural workers (National Institute of Occupational Safety and Health [NIOSH], 1995). The following areas emerged as concerns:

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Lesson 1: Ergonomic conditions/musculoskeletal injuries

Overview:

The heavy lifting, awkward body posturing, twisting and repetitive tasks of agricultural work lend themselves to the development of musculoskeletal injuries that can present acute problems and long-term disabilities for farmworkers. Contributing factors include poorly designed tools, lack of training, and long work hours. Most studies asking farmworkers about their health uncover a high level of backaches and other chronic conditions that cause lost work days, constant pain and difficulty moving.

(Back and neck pain were the most common types of chronic pain workers experienced. Over 40% of these workers left or changed jobs because of the pain they experienced.)

Health Education Outreach Materials:

<h2>Safe Lifting & Carrying</h2>	<h2>Seguridad al Levantar y Acarrear</h2>
 <p data-bbox="487 724 828 934">"I have to do a lot of lifting, but I try to be careful. If I hurt my back I won't be able to make money for my family"</p> <h3 data-bbox="178 997 795 1050">Prevent Back Pain and Injuries</h3> <ol data-bbox="162 1071 795 1396" style="list-style-type: none">1. Assess the job and get help with heavy objects.2. Stand close to object, and spread feet apart.3. Kneel down, and get a strong grip.4. Slowly lift with your legs by straightening them, remember to keep your back straight.5. Carry object close to your body, and avoid twisting when carrying.  <p data-bbox="162 1638 406 1680">(800) 343-7527</p> <p data-bbox="454 1554 828 1638">Funded in part by the New York State Department of Labor Hazard Abatement Program</p>	 <p data-bbox="1201 724 1542 934">"Yo tengo que levantar mucho, pero trato de ser cuidadoso. Si me lesiono la espalda no voy a ser capaz de hacer dinero para mi familia."</p> <h3 data-bbox="893 1018 1526 1071">Prevenga el Dolor de Espalda y Lesiones</h3> <ol data-bbox="876 1071 1526 1428" style="list-style-type: none">1. Calcule el trabajo y busque ayuda con los objetos pesados.2. Párese cerca del objeto y separe los pies.3. Arrodílese y sujete fuertemente.4. Con la espalda recta, levántese lentamente con las piernas, enderezándolas.5. Transporte el objeto cerca de su cuerpo y evite torcer la espalda cuando carga objetos pesados.  <p data-bbox="876 1638 1136 1680">(800) 343-7527</p> <p data-bbox="1218 1512 1526 1638">Pagado en parte por el Departamento de Trabajo de Nueva York, Programa de Reducción de Riesgo</p>

*Also available in Creole

Lesson 1: Ergonomic Conditions/Musculoskeletal Injuries handouts, cont.



**Stop
back
pain!**

Stretching:



Stretch before work, like a soccer player before the game.

Do each stretch 2 times and count to 10.

Lifting:



Use your legs.



Don't bend your waist.

Proper Carrying:



Keep object close to your body.

Keep your arms and elbows close to your sides.

Move your feet first then your upper body.

Do not twist your waist.

For Information on Where to Receive Healthcare in Your Area Call:



TREATMENT

Rest:



Try to rest one full day

Lie down and put a blanket under your knees

If you have to work, rest on breaks, at lunch and after work

Ice for Swelling:



Wrap ice in a cloth and use for 20 minutes every 2 hours for 24 hours to reduce swelling.

If you are working use ice in the morning, during breaks and at night

Heat for Cramping:



Wait 24 hours after the injury to apply heat.

Use heat for 20 minutes every 2 hours to relieve muscle cramping.

If you are working, use heat in the morning, during breaks and at night.

Medication:



Take Ibuprofen, Motrin, aspirin or Tylenol with food and water to relieve pain.

Stop taking the medicine if it makes you sick!

Brands available at most pharmacies



Read warnings and directions on the box!

***Also available in Spanish and Creole**

Lesson 2: Pesticide Poisoning Prevention

Overview:

Farmworker exposure to pesticides and the potential for health-related effects are probably the most documented and researched area within agricultural occupational health; yet, so many related hazards remain unknown and research left undone. The use of agricultural chemicals and required employee training are highly regulated covering all aspects of protection and education; yet so much remains unenforced and workers continue to be employed in hazardous situations.

Almost all research on pesticides used in agriculture tracks a single chemical. What is not known and continues to lack research is the effect of continuous exposure to a variety of pesticides. Additionally, little research has been done on the interaction of one pesticide on another, or on the adherents used within the pesticide formulation, many of which themselves may be hazardous (Simcox et al., 1999; Shaver and Tong, 1991; Moses, 1989). It is these topics that are the most relevant to farmworkers, as they are exposed to not a single pesticide but to multiple pesticides of various classifications, and to a variety of doses over an extended period of time. The chronic effects of association with pesticides, such as cancers, neurological problems, miscarriages, and impotence, are treated without considering long-term exposure to pesticides as a potential cause.

Health Education Outreach Materials:



Lesson 2: Pesticide Poisoning Prevention Handouts, cont.

A Guide on Laundering Pesticide Contaminated Clothing

If you handle or apply pesticides and your work clothing is to be washed at home, a few safety measures should be kept in mind. At the end of the work day, you can take several steps to reduce further skin exposure to the chemicals. They will also ensure that your family will not be exposed to the hazardous chemicals you might have come in contact with. These steps are:

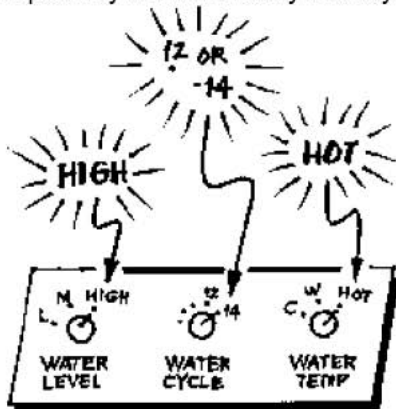


- Take off contaminated clothing at the work site and put them in a sealed plastic bag.
- Immediately take a shower with lots of soap and water. Put on clean clothes.
- Until you wash your contaminated clothes, keep them in the plastic bag outside the house where children cannot reach them.

Do not attempt to launder clothes that are heavily saturated with pesticides. Call your Ag. County Commissioner or the local waste removal office for advice on how to properly dispose of them.

When washing work clothing that may be contaminated with pesticides, follow these safety measures:

1. Wash the contaminated clothes separately from the family laundry.



Un guía para lavar ropa contaminada con pesticidas

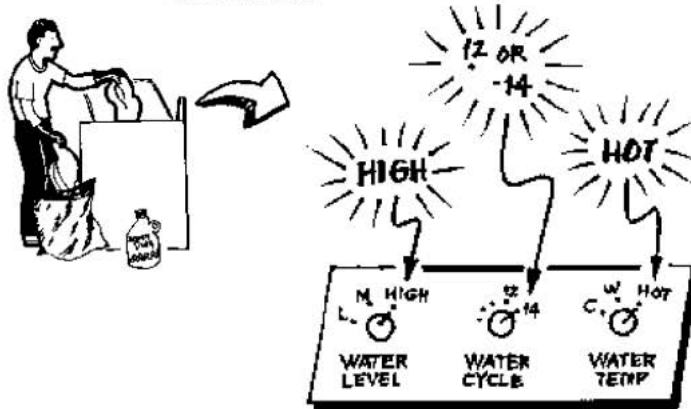
Si usted trabaja con o aplica pesticidas y tiene que lavar su ropa de trabajo en casa, recomendamos que tome algunas medidas de precaución. Al fin del día, tome medidas para reducir la posibilidad de contaminación. Así puede asegurar que su familia también este fuera de peligro.

- En su trabajo, ponga su ropa contaminada en una bolsa de plástico y ciérrela.
- Inmediatamente báñese bien con bastante jabón y agua. Pongase ropa limpia.
- Hasta que usted lave su ropa contaminada, déjela en la bolsa de plástico y fuera de la casa donde los niños no puedan alcanzarla y contaminarse.

No trate de lavar ropa que esta muy saturada con pesticidas. Llame al comisionado de agricultura en su condado la oficina local de remover desecho para informacion sobre coma disponer de la ropa.

Al lavar ropa que puede estar contaminada co pesticidas, siga estas medidas de precaución ; seguridad:

1. Lave la ropa contaminada aparte de la ropa de la familia.



Lesson 2: Pesticide Poisoning Prevention Handouts, cont.

2. Do not handle clothing with your bare hands. Wear rubber gloves or shake them from the plastic bag directly into the washer.

3. Pre-soak the clothes to dilute and make it easier to remove the pesticides.

4. Use full water level, hot water set-ting, and the longest water cycle. Also use a heavy duty liquid detergent.

5. After washing, remove the clothing and run the machine through another complete cycle using hot water and detergent. This will prevent contamination of other clothes with pesticide residues that might have stayed in the machine.

6. Hang the clothes outdoors on a clothesline. Sunlight helps break down any remaining pesticide residues on the clothes and you avoid contaminating the drying machine.

When a dryer is used, run it until the clothes are completely dry. After drying, run it (empty) for about ten more minutes.

Some people might think the steps recommended will cost extra money, time, and effort. These may be added costs, but following them helps ensure your family's health and your own. Follow these safety rules!



2. Evite tocar la ropa contaminada sin protección en sus manos. Es recomendable usar guantes de hule, o poner la ropa de la bolsa de plástico directamente en la lavadora.

3. Antes de lavar la ropa contaminada remojela un buen tiempo para que se lave más fácil.

4. Use el nivel de agua mas lleno posible, con agua caliente, y el ciclo de lavar mas largo. Use un detergente de líquido bien fuerte.

5. Después de lavar, vacíe la maquina y lavela con otro ciclo complete usando agua caliente y detergente. Este proceso es para prevenir la contaminación de otra ropa que se puede contaminar con los residuos que quedan en la maquina.

6. Cuelgue la ropa afuera para que no se contamine la secadora de ropa. Los rayos de sol ayudan en deshacer los residuos de pesticidas que quedan en la ropa.

Si usa secadora, procure que la ropa se seque completamente. Saque la ropa de la maquina, y por otros diez minutos deje andar la maquina sin ropa.

Este proceso puede gastar más dinero, tiempo y esfuerzo; pero ayuda asegurar a salud de su familia y la de usted. Por favor, siga estas medidas de seguridad/precaución!

Safety and Awareness Training for Agricultural Workers
UC Agricultural Health and Safety Center
and Agricultural Promotion System
NIOSH Cooperative Agreements
U05/CCU906055 and 906055-01
Department of Applied Behavioral Sciences

Lesson 3: Common vectors

Overview of Lyme Disease:

Lyme disease is an infection caused by a kind of bacteria carried by ticks. Lyme disease is prevalent in the northeastern. Farm workers are especially at risk for Lyme Disease because of prolonged exposure in fields and the outdoors.

One sign of Lyme disease is a rash, which may appear 3 to 30 days after a tick bite. It may begin as a small red spot and grow larger. The center may fade, creating a "bull's eye" or ring appearance, but this is not always the case. Some people with Lyme disease have many red spots. The rash may burn, hurt or itch, or you may not feel it.

Other symptoms of Lyme disease include fever, chills, headaches, stiff neck, fatigue, muscle aches and joint pain. In a few people, early Lyme disease can spread to the heart or the nervous system. If Lyme disease spreads to the heart, the person may feel an irregular or slow heartbeat. A high incidence of Lyme disease is suspected but not well documented among the farmworker population as many of the symptoms are flu-like and not all persons have the tell-tale concentric rings at the site of the tick but.

Overview of West Nile Virus:

West Nile virus (WNV) is a seasonal epidemic in North America that is transmitted by infected mosquitoes. Mosquitoes become infected when they feed on infected birds. Infected mosquitoes can then spread the virus to humans and other animals when they bite. In a very small number of cases, WNV also has been spread through blood transfusions, organ transplants, breastfeeding and even during pregnancy from mother to baby. WNV is not spread through casual contact such as touching or kissing a person with the virus.

The symptoms range from nothing at all to severe illness. People typically develop symptoms between 3 and 14 days after they are bitten by the infected mosquito. Approximately 80 percent of people (about 4 out of 5) who are infected with WNV will not show any symptoms at all. The severe symptoms can include high fever, headache, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness, vision loss, numbness and paralysis. These symptoms may last several weeks, and neurological effects may be permanent.

There is no specific treatment for WNV infection. In cases with milder symptoms, people experience symptoms such as fever and aches that pass on their own, although even healthy people have become sick for several weeks. In more severe cases, people usually need to go to the hospital where they can receive supportive treatment including intravenous fluids, help with breathing and nursing care.

Health Education Outreach Materials:

SIGNS & SYMPTOMS OF TICK-BORNE DISEASES

Lyme Disease: Early-rash or rashes, in 60 to 80% of cases often spreads with central clearing. May experience viral-like symptoms (fever, headache, body aches). Later - heart problems, neurological problems (weakness, memory loss, tremors), and arthritis.

Ehrlichiosis: High fever, severe headache that does not get better with pain medication, overall sick feeling, muscles ache, chills, sweating, nausea, vomiting. Less often; cough, joint pain, confusion, and rash. Can be serious. Prevalent in the Midwest and the East Coast.

Babesiosis: Symptoms include spiking fevers and chills. If the infection is severe intensive hospital care may be required.

Rocky Mountain Spotted Fever: Rash, especially on the extremities (soles of the feet and palms of the hands), headache and chills, delirium, shock, kidney failure, heart problems, neurological problems. Can be serious. Prevalent in both Eastern and Western US.

HOW TO DIFFERENTIATE RASHES

Spider bite: A spider's bite forms fluid filled bumps at the site of the bite.

Tick bite: A tick's bite is rarely felt and may form a small ring surrounded by a red halo.


Erythema migrans lesion: Red rash that occurs at the site of the bite. Center of the bite clears and rash develops outward.

AVOIDING TICK BITES

- Avoid known tick areas when possible.
- Wear long-sleeved shirt and long pants (tucked into socks) when walking in woods and fields.
- Wear light colored clothing to help spot ticks.
- Use safe tick repellent on skin or clothes. Ask your pharmacist for advice.
- Perform daily tick checks on yourself and your children, especially after being outdoors.
- Shower using a wash cloth to dislodge unattached ticks.

ASK YOUR HEALTH CARE PROVIDER ABOUT AVAILABLE TREATMENTS.

HOW TO REMOVE A TICK




- Using tweezers, grasp the tick near the mouth parts (as close to the skin as possible).
- Gently pull the tick in a steady, upward motion.
- Wash the area and use a disinfectant on the bite site.
- Record the date and location of the tick bite, and watch for early symptoms of Lyme disease over the next few weeks.

DO NOT squeeze the tick.
DO NOT pour kerosene on it.
DO NOT rub vaseline on the tick.
DO NOT use a smoldering match or cigarette butt.


All of these only increase the likelihood the tick will transmit the infection.

This tick card was supported by Cooperative Agreement No. U50/CCU219567 from the Centers for Disease Control and Prevention (CDC). Its contents are solely the responsibility of the ALDF and do not necessarily represent the official views of CDC.




Visit www.aldf.com for further information



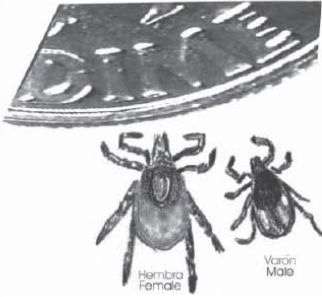
TICKS



Engorged tick

Lone star tick – Throughout the U.S.A.			
larvae	nymph	adult	
Black-legged tick – Midwest & Eastern U.S. "Deer Tick"			
larvae	nymph	adult	
American dog tick – Throughout the U.S.A.			
larvae	nymph	adult	
Western black-legged tick – West Coast			
larvae	nymph	adult	
Pacific coast tick – West Coast			
larvae	nymph	adult	

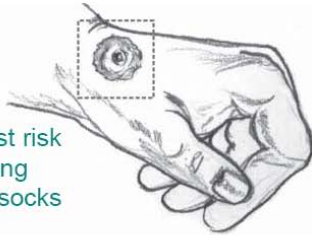
La Seguridad de la Enfermedad de Lyme Lyme Disease Safety



La picada de las garrapatas infectadas causan la enfermedad del Lyme.

Lyme Disease can be contracted by the bite of an infected deer tick.

- Los que trabajan al aire libre tienen más riesgo
- Vístase con ropa de colores claros, camisa de mangas largas, pantalones largos y calcetines
- Inserte la camisa en el pantalón y usar la ropa suelta
- Utilice el repulsivo de insectos de acuerdo a las instrucciones de uso
- Vea su médico si nota una reacción que dura más de un par de días en el área de la piel donde ocurrió la picadura



- Outdoor workers are at highest risk
- Wear light colored clothing, long sleeved shirt, long pants and socks
- Tuck in loose clothing
- Use insect repellent only as directed
- See a doctor if reaction occurs to tick bite that last longer than a few days



Pagado por el Programa de Disminución de Peligro del Departamento del Trabajo de Nueva York

Funded by the New York State Department of Labor Hazard Abatement Program

Proteccion Contra el Virus Del Nilo West Nile Virus Safety



- Los que trabajan al aire libre tienen más riesgo
- Vístase con camisa de manga larga, pantalones largos y calcetines
- Use el repelente de insectos de acuerdo a las instrucciones de uso
- Para evitar el criadero de mosquitos deshágase del agua estancada
- Si nota una reacción en la piel en el área de la picada del mosquito, comuníquese con un médico.

El virus se transmite a través de la picadura de un mosquito infectado

The virus is transmitted by an infected mosquito's bite

- Outdoor workers are at highest risk
- Wear long sleeved shirt, long pants and socks
- Use insect repellent only as directed
- Eliminate mosquito breeding areas by discarding standing waste water
- If a red reaction continues to occur to mosquito bite, see a doctor



Pagado por el Programa de Disminución de Peligro del Departamento del Trabajo de Nueva York

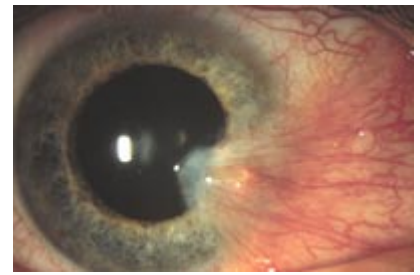
Funded by the New York State Department of Labor Hazard Abatement Program

Not available in Creole

Not available in Creole

Note: Bug/tick spray should be available for distribution.

Lesson 4: Preventing Pterygium (pronounced ter ig' ee um)



Overview: Agricultural Workers suffer from common eye disease called Pterygium. It is a sunburn of the eye that some called "carnosidad." Pterygium is caused by exposure to the ultraviolet rays of the sun, wind and dust. Pterygium appears as a grayish-white fleshy growth. It grows from the inside corner of the eye and extends out towards the center. It's not painful but your eyes may feel gritty and dry. Other symptoms may include irritation, redness, and tearing.

Since pterygiums are most commonly caused by sun exposure, protecting the eyes from sun, dust and wind is recommended. Instilling artificial tears liberally is also helpful to decrease irritation. In some cases, steroid drops are prescribed to reduce inflammation.

There is no medication to cure Pterygium. Surgery is the only way to remove the fleshy growth. Prescription eye drops can be used to alleviate the sensation of itchiness and dryness. You can prevent Pterygium and slow its growth by using a cap and sunglasses with 100% UV (ultraviolet) protection.)

Health Education Outreach Materials:

The Rural Women's Health Project Presents:

Más Vale Prevenir

De la serie, ¡OJO! con tu vista

Hombre, tú tienes que hacer esto. No puedo ver el tornillo.
 Te has puesto viejo, compadre.
 No tanto. Pero mi vista no es como antes.
 ¡Compadre, tu mujer te ha puesto ciego!
 Es cierto. Conchita es tan buena.
 Tienes tanta suerte. Mira, ya viene ella.

A ver hombres, descansen, este es su único día libre. Ese camión ya no tiene esperanza.
 Ya vengo con los refrescos.

Pero antes mi amor, es tiempo para ponerte las gotas en el ojo, ¿verdad? Aquí están.
 Me tratas tan bien, mujer.

Siempre está fregando con sus ojos. ¿Qué le pasa compadre?
 Tengo que cuidar mi vista para no quedarme ciego.

¿Qué? ¿Ciego? Habla en serio.
 Hablo en serio. Últimamente he notado que no puedo ver muy bien. Siento como que si tuviera arena en los ojos y están siempre secos.



Page 3, Pterygium



Page 4, Pterygium

*Not available in Creole

Note: One pair of sunglasses will be distributed per farm worker.

Overview of Eye Health:

A health issue for farmworkers recently receiving more attention is eye problems. Similar to dermatitis causing agents, farmworkers are exposed to potential eye irritants as they work including dust, pollen and chemicals. Untreated chronic eye problems can lead to serious damage (NIOSH, 1995); tree branches and accidents with agricultural tools can cause abrasions. Most Migrant Health Centers do not have an ophthalmologist on staff, and therefore may face difficulty offering comprehensive treatment. *(Itchy eyes were the most common complaint among pesticide sprayers as well as nonsprayers.)*

Health Education Outreach Materials:

Fotonovelo: “Para poder ver el futuro”

“Take Care of Your eyes, they are your future”



Page 1, Eye Health



Page 2, Eye Health

Lesson 4: Eye Health Handouts, cont.



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 This publication was made possible through funding from the Migrant Health Program, Bureau of Primary Health Care, Health Resources and Services Administration, U.S. Department of Health and Human Services and the Redlands Christian Migrant Association.

Page 3, Eye Health

Page 4, Eye Health

*Not available in Creole

Lesson 5: Contact Dermatitis

Overview of Dermatological Issues for Farm Workers:

Skin problems are extremely common among those who work the crops. These can be caused by plants that scratch the skin, by allergic reactions, by exposure to chemicals, or by other causes related to agricultural production. Most workers are hesitant to seek medical help for these conditions until they reach extreme levels.

Irritant Injuries - Dermatitis

30% of diagnoses for irritant injuries

- ▶ **90% of most cases of occupational dermatitis are contact dermatitis.**
- ▶ **Contact dermatitis is the most common occupational illness in the US.**

Irritant Contact Dermatitis: Most prevalent form of contact dermatitis. Occurs when a compound comes into direct contact with the skin, often more than once.

- ▶ Caused by contact with acids, alkaline materials, solvents, or other chemicals.
- ▶ Working around moisture, dirt, detergents, and chemicals increases risk.



▶ With enough exposure to the chemical, anyone can develop a reaction.

- ▶ Characterized by erythema and unilocular bullae, resulting from epithelial necrosis.
- ▶ Reaction usually resembles a burn.
- ▶ May result in irritant conjunctivitis

Allergic Contact Dermatitis: Less prevalent. Requires a sensitized immune system. Most common plant causing this reaction is poison oak/ivy.

- ▶ Immune system must be sensitized to a chemical or material prior to reacting (not everyone reacts to certain chemicals).



▶ Skin reaction usually takes over 24 hours to develop and can last for a few weeks.

- ▶ Acute allergic contact dermatitis is characterized by microvesicles.
- ▶ Skin inflammation varies from mild irritation and redness to open sores.

Photographs from <http://www.dermnet.com>

Common cause of allergic contact dermatitis: Poison Ivy/Oak/Sumac

- Urushiol is the chemical in the sap of poison ivy and oak plants that causes a rash, blisters, and an itch.
- Growers often spray herbicides beneath plants to keep undergrowth closely cropped. Poison ivy is immune to many of these chemicals, so competition from other plants is eliminated and poison ivy can spread freely.

Treatment:

- Immediately cleanse exposed skin with rubbing alcohol (alcohol removes the skin's protection along with the urushiol).
- Wash skin with water.
- Take a shower with soap and warm water.
 - ▶ **Do not use soap before this point because it will pick up some urushiol from the surface of the skin and spread it around.**
- Any tools, clothes, shoes, or other items that came into contact with the urushiol should be wiped off with alcohol and water.

Adams, RM. Occupational Skin Disease, 2nd Ed. Philadelphia: W.B Saunders Company, 1990.
Stehlin, Isadora. Poison Ivy Treatment Guide. FDA Consumer Magazine.
Available online at: http://pediatrics.about.com/cs/conditions/a/poison_ivy.htm

Commodities-Tobacco

This material may be reproduced for non commercial educational purposes.
New York Center for Agricultural Medicine & Health, Migrant Clinicians Network, 2006.

6

Health Education Outreach Materials:

Poison Ivy Safety



Spring

Keep poison ivy off your skin.

Know what poison ivy looks like:
 Has 3 leaves on the stem.
 Leaves may be red or green.
 Sometimes has ivory berries on the stem.



Summer

Before work:
 Wear long sleeve shirt and long pants.
 Wear gloves.
 Apply prevention lotion to skin that can't be covered.



Fall

After work:
 Wash work clothes separately from others.
 Clean boots, gloves, and tools to remove poison ivy oil.
 Wash exposed skin with soap and water.



" Last year when I was pruning I got poison ivy on my ankles. It was very itchy and sore."

Photos cordially provided by www.poison-ivy.com



NEC
 The Northeast Center for Agricultural Health
 800-343-7527

Project paid for in part by the makers of IvyBlock poison ivy prevention lotion.

Protección Contra la Hiedra Venenosa



Primavera

Evite la hiedra venenosa

Reconozca la forma de la planta:
 Tiene tres hojas en el tallo.
 Las hojas pueden ser rojas o verdes.
 Algunas veces tiene frutas de color crema en el tallo.



Verano

Antes de trabajar:
 Póngase pantalones largos y camisa de mangas largas.
 Póngase guantes.
 Aplique loción protectora en la piel que no esté cubierta.



Otoño

Después de trabajar:
 Lave su ropa de trabajo separada de la otra ropa.
 Limpie las botas, los guantes y las herramientas llenas del aceite venenoso de las plantas.
 Lave la piel que ha sido expuesta a la planta con agua y jabón.



" El año pasado, cuando podaba en el campo, toqué la Hiedra con mis tobillos. Picaba mucho y era doloroso."

Fotos disponibles en www.poison-ivy.com



NEC
 The Northeast Center for Agricultural Health
 800-343-7527

Este proyecto ha sido pagado en parte por IvyBlock.

*Also available in Creole

Lesson 6: Green Tobacco Illness (for tobacco farmers only)

Overview:

A recent study found close to half of tobacco workers interviewed said they experienced the symptoms of green tobacco sickness at least once while working the season. This illness is related to dermal exposure to wet tobacco.

Intoxication Injuries—Green Tobacco Sickness (GTS) **Characteristics, factors**

- ▶ The surface of wet tobacco leaves contain nicotine, and dermal contact causes absorption.
- ▶ 24% of tobacco workers have GTS at least once a year.
- ▶ Workers experience about 2 days of illness for every 100 days at risk.

Characteristics of GTS

- ▶ GTS usually occurs in the afternoon or evening (several hours after exposure).
- ▶ Dermal absorption of nicotine, an alkaloid, may cause the following:

Generally, GTS is diagnosed if a patient is experiencing nausea or vomiting, AND headache or dizziness, and has worked in tobacco that day or the previous day.

- ▶ Other symptoms may include abdominal cramps, headache, prostration, difficulty breathing, abdominal pain, diarrhea, and fluctuations in blood pressure or heart rate.
- ▶ GTS is normally self-limiting, but a case may be severe enough to result in dehydration. Emergency medical care may be needed.

GTS protection and treatment methods for tobacco farmworkers:

- ▶ If possible, avoid handling wet tobacco.
- ▶ Plastic or rubber protective aprons or rainsuits will reduce dermal nicotine absorption, but watch for signs of heat stress.
- ▶ Chemical resistant gloves, such as those recommended for pesticide mixing, will protect workers' hands from nicotine absorption. See glove pictures below.
- ▶ Changing into dry clothes after a worker's clothing becomes completely wet with moisture from the tobacco plants will help reduce nicotine absorption.
- ▶ Over-the-counter medicines may help treat symptoms of GTS, but they should only be taken while not working because their side effects may be dangerous in the workplace.
- ▶ Cleansing the skin with cold water (hot water may hasten the absorption of nicotine) to remove tobacco sap may help alleviate symptoms.

F Blosser. NIOSH issues warning to tobacco harvesters. Available online at www.cdc.gov/niosh/93-115.html (June 29, 2004).



Left: Gloves before working with tobacco.
Right: Gloves after working with tobacco.



- ▶ Generally, medication is prescribed that alleviates nausea and vomiting (antiemetics).

Green Tobacco Illness (GTS) Handouts:

La Enfermedad del Tabaco Verde

El Monstruo Verde



¿Qué es la enfermedad del tabaco verde?

La enfermedad del tabaco verde es una enfermedad que te da cuando trabajas en los campos de tabaco.

¿Cuáles son los síntomas?

- ◇ Dolor de cabeza
- ◇ Mareos
- ◇ Náusea
- ◇ Vómitos
- ◇ Debilidad
- ◇ Insomnio
- ◇ Pérdida del apetito



¿Qué causa la enfermedad del tabaco verde?

La enfermedad del tabaco verde te da cuando la nicotina de las plantas del tabaco se pega a tu cuerpo.

La nicotina de las plantas del tabaco se mete en tu cuerpo a través de tu piel.

Es más fácil que te dé la enfermedad del tabaco verde cuando las plantas de tabaco están mojadas.

¿Cómo prevenir la enfermedad del tabaco verde?

- ◇ Use una camisa de manga larga, pantalones largos y una gabardina o chamarra para la lluvia.
- ◇ Cambiense de ropa si se le moja.



¿Cómo tratar la enfermedad del tabaco verde?

- ◇ Tome líquidos como agua o Gatorade (no soda ni cerveza).
- ◇ Bañese y cambiense la ropa.
- ◇ Tome medicina para las náuseas como Dramamine o Benadryl



Para mayor información llame al:

WAKE FOREST
UNIVERSITY

SCHOOL of MEDICINE
THE BOWMAN GRAY CAMPUS

Thomas A. Arcury, Ph.D.
Sara A. Quandt, Ph.D.
Deborah Norton, M.D., M.P.H.

Drawings by: Tim Rickard

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Lesson 6: Green Tobacco Illness prevention handouts, cont.

My name is Juan. This story is about what happened to me last summer when I got green tobacco sickness. Last summer was my first time working in tobacco. I was eager to start. We went to the fields very early in the morning.



The tobacco leaves were wet. My T-shirt and pants got soaked from the water on the leaves. I carried the leaves under my arms. My T-shirt also got yellow and sticky from the tobacco juice.



Later, the sun started to dry off the leaves. It got very hot in the field. I had to bend over again and again to pick the lower leaves.

The smell of the tobacco was very strong, and there was no breeze to stir the air.



After lunch, I started to feel dizzy. Then I got a headache. I was nauseous, and I threw up.

None of the other workers were sick. Some of them said they had felt the same way when they first started working in tobacco.



I lay down in the truck, but I still felt sick. Another worker had to drive me home early that day.



One worker said I should drink some milk, but I still felt sick. Another worker told me to take some pills for motion sickness, but those did not help either.



I could not eat the rest of the day. I also had trouble sleeping that night. I felt very restless. The longer I stayed awake, the more I worried about missing work the next day.



The next day, I was too weak to work. I spent the whole day sitting in a chair. I was really worried, because I might not have enough money to send home to my family. The other workers told me about workers who had been so sick working in tobacco that they had to go home. I was also afraid I might be fired.



I went back to work, but I was still weak. I had a hard time keeping up with the other workers. Every day I felt sick in the evening, although it was not as bad as the first day.

Lesson 6: Green Tobacco Illness handouts, cont.



The outreach worker said the best way to prevent green tobacco sickness is to wait to go into the field until the leaves are dry. If you have to work in wet tobacco, you can protect yourself by wearing a rainsuit until the leaves dry off.



The outreach worker told me to wear a long sleeve shirt. It will help keep the tobacco juice off my skin.



It is also a good idea to bring a change of clothes to work. If your work clothes get wet with water from the tobacco leaves, you can change into dry clothes.



If you get wet while you are in the field, you should:

- change your clothes once they get wet
- wash off with warm, soapy water after being in the field

It is also important to try to wear clean clothes everyday. Clothes that you wore yesterday may still have nicotine from the tobacco on them.



I know how to avoid green tobacco sickness. I can work as much as the others. My boss is very happy that I am working. I am very happy to be working again. I can earn money to send home to my family.



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NASD Review: 10/2002

***Also available in Spanish**

Lesson 7: Heat and Sun Safety

Overview:

All farmers are exposed to prolonged hours in hot and humid conditions. Many do not have an adequate supply of water, and protective sun gear or lotions which lead to heat exhaustion and sun damage.

A high incidence of cancer is suspected but not well documented among the farmworker population. Agricultural workers are exposed to known cancer-causing chemicals, and studies find a high prevalence of breast cancer, brain tumors, non-Hodgkin's lymphoma, and leukemia within agricultural communities. Constant exposure to the sun can promote skin cancer within workers. Because farmworkers are mobile, live and work within numerous and varied situations, and may move in and out of agricultural work, the long-term studies necessary to investigate cancer prevalence have been lacking with this population.

Heat and Sun Safety Handouts:

Heat and Sun Safety



"If I don't drink lots of water I get a bad headache and sometimes I even feel dizzy."

Protect Yourself From Heat Stress and Skin Cancer

Use Sun Screen, SPF 15 or Higher

Wear Light Colored Cotton Clothes

Wear a Full Brim Hat

Drink Plenty of Water Before, During and After Work.

Sit in Shade During Breaks

NEC

The Northeast Center
for Agricultural Health

(800) 343-7527

Funded in part by the New York
State Department of
Labor Hazard
Abatement Program

Seguridad del Calor y del Sol



"Si no tomo mucha agua me dan fuertes dolores de cabeza y algunas veces me siento mareado."

Protégase del Sobre Calentamiento y del Cáncer de la Piel

Use Protector del Sol, SPF 15 o Mayor

Vístase con Ropa Ligera y Clara de Algodón

Use Sombrero

Tome Mucha Agua Antes, Durante y Después de Trabajar

Durante los Descansos Sientese a la Sombra

NEC

The Northeast Center
for Agricultural Health

(800) 343-7527

Pagado en parte por el
Departamento de Trabajo de
Nueva York, Programa de
Reducción de Riesgo.

Lesson 7 Cont: Overview of Skin Cancer Prevention:

The sun sheds invisible ultraviolet rays which can be extremely dangerous to the skin and are responsible for sunburn, premature aging and other types of skin damage including cancer. Agricultural workers top the list of candidates for skin cancer because they are outdoors and are exposed to the sun on a daily basis.

There are three basic types of skin cancer: Basal-cell carcinoma, Squamous-cell carcinoma and Melanoma. The first two types are very common and easily curable, while the third type, Melanoma, if not detected early, can be very dangerous and even deadly.

Melanoma is different from other skin cancers because it has a tendency to spread to other parts of the body. Once it reaches vital organs melanoma is very difficult to treat, and can be lethal. People who work outdoors, such as agricultural workers, are exposed to the sun on a daily basis. It is critically important that these people be keenly aware of skin cancer's warning signals and get into the habit of doing regular monthly self examinations

Melanoma

❖ What is Melanoma?

Melanoma is a type of skin cancer that develops from excessive exposure to UV light.

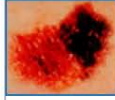
❖ Early Warning Signs

The appearance of a new bump or nodule

- *Color spreads into surrounding skin*
- *Redness or swelling beyond the mole*
- *Pain*
- *Tenderness*
- *Itching*
- *Bleeding*
- *Oozing*
- *Scaly appearance*

ABCD's of Melanoma:

A sudden or continuous change in the appearance of a mole is a sign that you should see your doctor. The ABCD rule can help you remember the symptoms of melanoma:



A for Asymmetry
One half is different than the other half.



B for Border Irregularity
The edges are notched, uneven, or blurred.



C for Color
The color is uneven. Shades of brown, tan, and black are present.



D for Diameter
Diameter is greater than 6 millimeters.

E for Elevation
Elevation means the mole is raised above the surface of the skin and has an uneven surface.

Self-Examinations:

Know your skin and your pattern of moles, birthmarks, and freckles. Use a full-length mirror and a hand mirror to examine your skin after you shower or bathe.



Examine the front and back of your body, then right and left sides, arms raised.



Bend your elbows and inspect forearms, underarms, and palms.



Look carefully at the backs of the legs, the feet (including spaces between the toes) and the soles of the feet.



Examine the back of your neck and scalp using a hand mirror. Part your hair to look closely.



* Also Available in Spanish

Information provided courtesy of Chiron Corporation

Lesson 7: Heat Stroke Prevention Handout:

Prevention - Prevención

WATER-WATER-WATER-WATER
AGUA-AGUA-AGUA-AGUA

Shade
Sombra

Rest breaks
Descansos

Wear loose clothing that breathes and a hat
Use ropa floja que permita ventilación y un sombrero

1/2 liter every 1/2 hour
1/2 litro cada 1/2 hora

Watch the heat index
Mire al índice de calor

Signs and Symptoms - Síntomas y Señales

Fainting
Desmayo

Fatigue-weakness
Fatiga-debilidad

Nausea-vomiting
Nausea-vomito

Dizziness
Mareo

Headache
Dolor de cabeza

Weak-rapid pulse
Pulso débil-rápido

Anxiety - poor judgment - inquietud - pobre criterio

Heat Stroke

1. Dry, hot skin
2. Very high body temperature
3. Confusion!

Ataque de Calor

1. Piel seca, caliente
2. Temperatura muy alta del cuerpo
3. Confusión!

Heat Exhaustion

1. Moist, clammy skin
2. Normal or subnormal temperature

Agotamiento de Calor

1. Piel mojada, húmeda
2. Temperatura normal o subnormal

Signs & symptoms of heat stroke and heat exhaustion
Señales y síntomas de ataque de calor y agotamiento de calor

Lesson 8: Overview sexually transmitted diseases (STDs)

Of the migrant farm worker in Connecticut interviewed at the UConn Migrant Farm Worker Clinics, many have experienced or are experiencing sexually transmitted diseases. Many of the farm workers are sexually active as sex workers frequent the farms. Several of the clients claimed that they have had unprotected sex while in Connecticut. To address the issues associated with unprotected sex and sexually transmitted disease, health education pamphlets and condoms (male and female) are distributed at the farm clinics.

The State of Connecticut Department of Public Health, Sexually Transmitted Disease (STD) Control Program will provide educational pamphlets in limited quantities to health care providers practicing in Connecticut. If interested, please print the following STD Pamphlet Order Form. Mail the completed form to the STD Control Program at the address indicated.

Several of the pamphlets that have been distributed to clients:

- **Condoms and Safer Sex**
- **Los condones, Como usarlos**
- **About HIV and AIDS**
- **Safer Sex Starts with a condom**

Images are not available at this time.

SUBMIT ORDER TO:

State of Connecticut
Department of Public Health
410 Capitol Ave., MS #11STD
P. O. Box 340308
Hartford, CT 06134-0308
(860) 509-7920
(860) 509-7275 Fax

ATTN: GWEN CAMPBELL

Lesson 9: Nutrition

Note: Many of the migrant farm workers are provided with meals by their employer as part of their contract (especially tobacco farms).

HEALTHY FOODS			
<p>Eat these foods in the right amounts, at the right times of the day. Don't skip meals and don't eat too much!</p>			
<p>Fruit: Fresh has less sugar than canned in heavy syrup.</p>  <p>(3 - 4 servings a day)</p>	<p>Vegetables: fresh and frozen have less salt than canned.</p>  <p>(3 - 5 servings a day)</p>	<p>Lean meats such as chicken, or turkey without the skin, lean fish, lean ground beef, ground turkey, lean cuts of pork, low fat cheese</p>  <p>(2 - 3 servings a day)</p>	
<p>Low fat milk and yogurt</p>  <p>(2 - 3 servings a day)</p>	<p>Calorie free drinks —including water!</p> 	<p>Starches such as breads, cereals, tortillas, rice, soup, beans, corn.</p>  <p>(6 servings a day)</p>	
<p>REMEMBER! Don't eat too much at one time. It's better to eat several small meals and snacks through the day.</p>			
<p>(Portion recommendations from TX Dept of State Health Services publication "Food for Life, Living well with Diabetes".)</p>			
FOODS TO LIMIT			
<p>There aren't any foods that you can never have, but be careful with the following foods and don't eat them too often.</p>			
<p>Sweet drinks: Sodas, Kool-Aid, Gatorade, and Sunny Delight</p> 	<p>Foods high in fat and sugar: Ice cream, chocolates, cakes, cookies, and chips</p> 	<p>Greasy or fatty foods: chorizo, cheese, hot dogs, beans prepared with fat, fried foods, fried tortillas, fast food</p> 	
<p>No more than 2 or 3 tortillas at a time</p> 	<p>Whole milk</p> 	<p>Poultry with the skin on</p> 	<p>Canned, processed meats that are high in fat like Spam and lunch meats</p> 
<p>MCN</p>		<p>Developed by Migrant Clinicians Network, 512-327-2017. Funding provided by Texas Department of State Health Services.</p>	
			



What is your portion size?

Portion Sizes Are in Your Hand

A fist or cupped hand = 1 cup



Eat 2½ cups of vegetables and 1½ cups of fruit each day. Eat ½ cup portions several times a day.

1 tennis ball = ½ cup fruit



One-half cup is a healthy portion of fruit and vegetables.

A thumb = 1 oz. of cheese

Eat low-fat cheese and yogurt and drink low-fat milk. You need three cups from the milk group each day. You need 1-1½ ounces of cheese to equal one cup of milk.



Palm or deck of cards = 3 oz. of meat

Eat 5 ounce equivalents from the meat and bean group each day. Estimate the amount you are eating with your palm. One youth palm equals 2-3 ounces, depending on size of hand.



Handful = 1-2 ounces of snack food



Snacking can add up. One ounce equals 1 handful nuts or small candies or 2 handfuls chips



Thumb tip = 1 teaspoon

Eat small amounts of high-fat foods such as peanut butter and mayonnaise. One teaspoon is the end of your thumb—from the knuckle up.

Adapted from Portion Sizes and School-Age Children, NC SNAC 2003

A Partnership of the Maternal and Child Health Coalition of Greater Kansas City
And the Kansas City Chronic Disease Coalition
Funded by the Health Care Foundation of Greater Kansas City
For more information, go to www.mchc.net

Lesson 10: Tuberculosis

© 2007. Producido por el Rural Women's Health Project (El Proyecto de Salud en pro de la Mujer Rural) con apoyo por el Subcomité Nacional de Tuberculosis y Enfermedades Respiratorias (SubComite Nacional de Tuberculosis y Enfermedades Respiratorias) CDC No. 50525-01-0001.



Debe saber que los servicios para la tuberculosis están disponibles para todos.

Para más información:


12

— Aprender sobre la tuberculosis es —




Vivir
A Todo Pulmón

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Debe saber que los servicios para la tuberculosis están disponible para todos.

Para más información:

12

— Aprender sobre la tuberculosis es —




Vivir
A Todo Pulmón

La tuberculosis es una enfermedad que afecta sobre todo a los pulmones.



También se conoce como TB.

2

Para no infectar a su familia o a los que viven o trabajan cerca de usted...



...siempre debe cubrirse la boca al toser o estornudar.

11

La tuberculosis es una enfermedad que afecta sobre todo a los pulmones.



También se conoce como TB.

2

Para no infectar a su familia o a los que viven o trabajan cerca de usted...



...siempre debe cubrirse la boca al toser o estornudar.

11

Si ha tenido síntomas, con la medicina usted se sentirá mejor y no transmitirá la tuberculosis a otros.



10

La tuberculosis es una enfermedad transmisible y cualquier persona puede ser afectada. Pero es fácil de detectar y es curable.



Sin embargo, si no se atiende a tiempo, puede ser mortal.

3

Si ha tenido síntomas, con la medicina usted se sentirá mejor y no transmitirá la tuberculosis a otros.



10

La tuberculosis es una enfermedad transmisible y cualquier persona puede ser afectada. Pero es fácil de detectar y es curable.



Sin embargo, si no se atiende a tiempo, puede ser mortal.

3

La tuberculosis es causada por pequeñísimos gérmenes que están en el aire cuando un enfermo con TB tose, estornuda, habla, canta o se ríe.




4

Si los resultados indican que usted tiene tuberculosis, necesitará empezar a tomar medicina lo más pronto posible.



9

La tuberculosis es causada por pequeñísimos gérmenes que están en el aire cuando un enfermo con TB tose, estornuda, habla, canta o se ríe.



4

Si los resultados indican que usted tiene tuberculosis, necesitará empezar a tomar medicina lo más pronto posible.



9

Complete Fotonovela available on the Migrant Clinicians Network website