Risk Factors for Cholinesterase Depression among Pesticide Handlers

Survey Instrument

*English Version*
This is a practice question. Please select the apples and the grapes from the following list. When you have selected these two items, press "continue" to begin the survey.
We would like to start by asking you a few questions about your pesticide handling activities at work.

Each of the following questions is asking about your activities for only the last 30 days.
In the last 30 days, did you ever apply pesticides using any of the following equipment? Select all responses that apply, then hit "continue" to go to the next screen.

- Tractor-pulled air blast sprayer
- Weed sprayer with horizontal arms
- Tower sprayer
- Backpack sprayer with a hand wand

Applied pesticides using some other method
Did not apply pesticides
In the last 30 days, did you ever perform any of the following handling activities? Select all responses that apply, then hit "continue" to go to the next screen.

Mix pesticides or load pesticides into spray tanks
Repair spray equipment in the shop
Enter a pesticide storage room
Enter a field or orchard that was recently sprayed
Control traffic during a pesticide application
Supervise a pesticide application in the field or orchard
Did not perform any of these handling activities
In the last 30 days, did you ever perform any of the following cleaning activities?
Select all responses that apply, then hit "continue" to go to the next screen.

- Cleaned spray equipment
- Cleaned personal protective equipment
- Cleaned a pesticide storage space
- Cleaned up after a pesticide spill
- Cleaned out pesticide containers
- Did not perform any of these cleaning activities
In the last 30 days, which of the following organophosphate or carbamate pesticides did you use? Select all responses that apply, then hit "continue" to go to the next screen.

- Lorsban or Dursban / Chlorpyrifos
- Guthion / Azinphos-methyl
- Sevin / Carbaryl
- Imidan / Phosmet
- Diazinon
- Malathion
- Supracide / Methidathion
- Monitor / Methamidophos
- Vapona / Dichlorvos or DDVP
- Cygon or Digon / Dimethoate
- Other organophosphate or carbamate pesticide
- I am not sure which pesticides I used
We want to know about how you might have been exposed to these specific pesticides. Throughout the rest of the survey, please tell us what you usually do when you are handling these types of pesticides.
When was the last time that you handled any of the pesticides that you identified in the last question?

Choose One
- Today
- Yesterday
- 2-7 days ago
- 8-14 days ago
- 15-30 days ago
- More than 30 days ago
In the last 30 days, approximately how many total hours did you spend handling these pesticides?

Choose One
- Less than 10 hours
- 10-19 hours
- 20-29 hours
- 30-39 hours
- 40-49 hours
- 50+ hours
In the last 30 days, which of the following crops did you treat with pesticides? Select all responses that apply, then hit "continue" to go to the next screen.

- Apples
- Cherries
- Grapes
- Hops
- Pears
- Peaches
- Apricots
- Plums

- Some other crop or crops
- Did not apply pesticides
- I do not know which crops I treated

Quit  Sound off  Back  Read Again  Don't know  Don't want to answer
Next we would like to ask you some questions that are specifically about your activities using an air blast sprayer in the last 30 days.
Did your tractor have an enclosed cab?

Choose One
- No
- Yes
In the last 30 days, did you ever unclog spray nozzles during pesticide applications?

Choose One

- No
- Yes
How did you usually unclog the spray nozzles?

- Took off my gloves
- Took off my nitrile or chemical-resistant gloves, but wore disposable latex gloves
- Wore my nitrile or chemical-resistant gloves
Workers can get exposed to pesticides if they use application equipment, such as a tractor, for other activities before it is washed. In the last 30 days, how often did this happen to you?

Choose One
- Never
- Sometimes
- Often (every day or almost every day)
When you performed mechanical repairs on spray equipment in the shop, did you wear gloves?

- No
- Yes, I wore disposable gloves
- Yes, I wore nitrile or chemical-resistant gloves
- Yes, I wore cloth gloves
- Yes, I wore leather gloves
- Yes, I wore some other type of gloves
In the last 30 days, did you ever do repairs inside a spray tank?

Choose One

- No
- Yes
In the last 30 days, did any pesticides ever get on to your skin, eyes, or mouth?

Choose One

- No
- Yes
In the last 30 days, did you ever handle equipment with your bare hands that was wet from spraying?

Choose One

- No
- Yes
In the last 30 days, how often did you spray for more than eight hours at a time?

Choose One

- Never
- 1-2 times
- 3-4 times
- 5+ times
In the last 30 days, how long would it normally be from the time that a spray session ended to the time when you took a shower?

Choose One
- Less than an hour
- 1-2 hours
- 3-4 hours
- 5+ hours
- Usually don’t shower until the next morning
In the last 30 days, did you ever handle pesticides at other worksites besides your main place of employment?

Choose One

- No
- Yes
Now we would like to ask you some questions about the type of personal protective equipment that you usually wear when you are handling pesticides. Please select the articles that you wear most often during pesticide applications.
Please select the type of respiratory protection that you usually wear when handling pesticides.

- **Half-face respirator**
- **Full-face respirator**
- **Powered air purifying respirator (helmet or hood)**
- **Other type of respirator**

- **Dust mask**
- **I don’t wear a respirator**
Have you been fit tested for your respirator in the last 12 months?

Choose One
- No
- Yes
- Don’t know
In the last 30 days, how often did you perform respirator seal checks?

Choose One

- Never
- Sometimes
- Always
- Don’t know what respirator seal check means
When do you change your respirator cartridges?

Choose One

- When it is hard to breathe while wearing the respirator
- When I can smell pesticides while wearing the respirator
- On a regular schedule: every day
- On a regular schedule: every week
- On a regular schedule: once per month
- On a regular schedule: once per year
- Don’t know
Please select the type of eye protection that you usually wear when handling pesticides.

Safety glasses
Goggles
Face shield
Other eye protection

I don’t wear eye protection
Please select the type of head covering that you usually wear when handling pesticides.

- Rain hat
- Chemical resistant hood
- Baseball cap by itself
- Other head covering

I don’t wear head covering
Please select the type of gloves that you usually wear when handling pesticides.

- Nitrile or chemical-resistant gloves alone
- Disposable gloves underneath nitrile or chemical-resistant gloves
- Cloth gloves underneath nitrile or chemical-resistant gloves
- Leather gloves alone
- Cloth gloves alone
- Other type of gloves
- I don’t wear gloves
Do you think that your gloves are too thick to do certain handling activities while wearing them? Examples of these activities include unclogging spray nozzles, adjusting the pressure regulator, or making mechanical repairs to spray equipment.
Please select the type of footwear that you usually wear when handling pesticides.

- Chemical-resistant boots
- Leather boots
- Other type of boots
- I don't wear boots
Please select the protective clothing items that you usually wear when handling pesticides. Select all items that apply, then hit "continue" to go to the next screen.

Chemical-resistant overalls
Chemical-resistant jacket (rain jacket)
Chemical-resistant apron
Chemical-resistant coveralls (Tyvek suit)

Other chemical-resistant clothing
I don’t wear chemical-resistant clothing
Please describe the general condition of the personal protective equipment that you wear when handling pesticides.

Equipment with lots of wear and tear should be classified as "poor condition". Equipment that is new or as good as new should be classified as "excellent condition".
Where do you usually store your personal protective equipment?

- At home
- In the car
- In a locker at work
- In another storage space at work
- In a pesticide storage room
- Other location
In the last 30 days, how often did you wear a hooded sweatshirt underneath your personal protective equipment when handling pesticides?

Choose One
- Never
- Sometimes
- Always
In the last 30 days, how often did you wear a baseball cap underneath your personal protective equipment when handling pesticides?

Choose One

- Never
- Sometimes
- Always
In the last 30 days, how often did you wear a bandana underneath your personal protective equipment when handling pesticides?

Choose One

- Never
- Sometimes
- Always
The next few questions ask you about washing your hands after handling pesticides.
In the last 30 days, which of the following hand washing supplies did you usually use after handling pesticides? Select all responses that apply, then hit "continue" to go to the next screen.

- Water
- Bar soap or liquid soap
- Chemical hand sanitizer gel
- Hand wipes (disposable moist towelettes)
- Shop towels
- Cloth towel or rag
- Other
- I don’t wash my hands after handling pesticides
In the last 30 days, were you ever unable to wash your hands at the end of a spray session?

Choose One

- No
- Yes
In the last 30 days, did you ever stop spraying or take a break during a spray session for any of the following reasons? Select all responses that apply, then hit "continue" to go to the next screen.

- Drink water or another beverage
- Eat
- Smoke
- Use a cellular phone
- Use a two-way radio or walkie-talkie
- Urinate in the orchard or field
- Use a portable toilet
- I never stopped spraying for any of these reasons
In the last 30 days, how often were you able to wash your hands first before drinking water or another beverage during a spray session?

Choose One
- Never
- Sometimes
- Always
In the last 30 days, how often were you able to wash your hands first before eating during a spray session?

Choose One

- Never
- Sometimes
- Always
In the last 30 days, how often were you able to wash your hands first before smoking during a spray session?

Choose One

- Never
- Sometimes
- Always
In the last 30 days, how often were you able to wash your hands first before using a cellular phone during a spray session?

Choose One

☐ Never
☐ Sometimes
☐ Always
In the last 30 days, how often were you able to wash your hands first before using a two-way radio or walkie-talkie during a spray session?

Choose One

- Never
- Sometimes
- Always
In the last 30 days, how often were you able to wash your hands first before urinating in the orchard or field during a spray session?

Choose One:
- Never
- Sometimes
- Always
In the last 30 days, how often were you able to wash your hands first before using a portable toilet during a spray session?

Choose One

- Never
- Sometimes
- Always
In the last 30 days, did you ever wear work clothes that may have been contaminated with pesticides without washing them first? This includes your hat, sweatshirt, or other articles of clothing.

Choose One

- No
- Yes
- Not sure
Now we would like to ask you a few questions about your work experience in agriculture.
In total, for how many years have you handled pesticides in your work?

Choose One
- One year or less
- 2-3 years
- 4-5 years
- 6-10 years
- 11-15 years
- 16-20 years
- More than 20 years
Do you have an applicator license?

Choose One

- No
- Yes
- Don’t know
In the last 12 months, did you ever receive training about safe pesticide handling procedures from a licensed pesticide applicator?

Choose One
- No
- Yes
- Received training, but don’t know if trainer was a licensed pesticide applicator
Now we would like to ask you a few questions about your medical history. We will also ask you about other potential risk factors for cholinesterase depression.
Do you have a medical history of liver disease such as hepatitis or cirrhosis?

Choose One

☐ No
☐ Yes
☐ Don’t know
In the last 30 days, how often did you take Tylenol?

Choose One

- Never
- Sometimes
- Often (every day or almost every day)
Do you take medications to treat any of the following conditions? Select all responses that apply, then hit "continue" to go to the next screen.

Choose One or More

- High cholesterol
- Glaucoma
- Myasthenia Gravis
- Tuberculosis
- Alzheimer's Disease
- Malaria
- I take medication for another condition not listed here
- I don't take any medications
- Don't know
How often do you usually drink alcoholic beverages?

Choose One

- Never
- Rarely (less than one day per week on average)
- One day per week
- 2-3 days per week
- 4-6 days per week
- Every day
Do you currently smoke cigarettes every day, some days, or not at all?

Choose One
- Every day
- Some days
- Not at all
In the last 30 days, how often did you use insecticides inside your home?

Choose One

- Never
- Sometimes
- Often (every day or almost every day)
In the last 30 days, did you ever experience any health symptoms or illnesses that you think may have been related to exposure to pesticides?

Choose One
- No
- Yes
- Don't know
In the last 30 days, did you ever experience any of the following symptoms or illnesses? Select all responses that apply, then hit "continue" to go to the next screen.

- Skin irritation, rash, or dermatitis
- Eye irritation
- Nose/throat irritation
- Blurred vision
- Dizziness
- Asthma
- Wheezing or trouble breathing
- Headaches
- Nausea or vomiting
- Diarrhea
- Other symptoms or illnesses
- No symptoms or illnesses
How concerned are you about your health being affected by exposure to pesticides?

Choose One
- Not at all concerned
- A little bit concerned
- Very concerned
- I do not have an opinion
Finally, we would like to ask you a few questions about you and your personal background.
What year were you born?

- Before 1942
- 1942
- 1943
- 1944
- 1945
- 1946
- 1947
- 1948
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- 1986
- 1987
- 1988
- 1989
- After 1989
Are you male or female?

Choose One
- Male
- Female
What is your ethnic or racial background? Select all responses that apply, then hit "continue" to go to the next screen.

Choose One or More

- Hispanic or Latino
- African-American
- Asian/Pacific Islander
- Caucasian
- Native American
- Other
In general, how would you rate your health?

Choose One
- Poor
- Fair
- Good
- Excellent
Did you go to school in Mexico or in the United States?

Choose One

- In Mexico
- In the United States
- In both Mexico and the United States
- Did not attend school
If you studied in Mexico, what level of education did you complete?

Choose One

- Part of primary school
- Completed primary school
- Completed middle school
- Completed high school
- Completed college or university
If you studied in the United States, what level of education did you complete?

Choose One
- Less than the sixth grade
- Through the sixth grade
- Some high school
- Completed high school
- Completed college or university
How well can you read in Spanish?

Choose One
- Not at all
- Not very well
- Fairly well
- Very well
How well can you read in English?

Choose One
- Not at all
- Not very well
- Fairly well
- Very well
Please select the response that best describes where you live:

- In town
- In the country, away from orchards
- In the country, near orchards
- Within an orchard or right next to an orchard

Other
You have completed the questionnaire. Thank you very much. Your help is very important to determine the possible causes of cholinesterase depression. If you return for another blood sample, you may be asked to answer this questionnaire again.